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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED SECOND CONGRESS

FIRST SESSION

ON

S. 1507

AUTHORIZING APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEARS FOR THE ARMED FORCES AND FOR OTHER PURPOSES

PART 3
READINESS, SUSTAINABILITY, AND SUPPORT

APRIL 11, 17, 24; MAY 15, 16; JUNE 21, 1991

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

THURSDAY, APRIL 11, 1991

U.S. Senate,
Subcommittee on Readiness,
Sustainability and Support,
Committee on Armed Services,
Washington, DC.

LOGISTICS PROGRAMS IN THE FISCAL YEARS 1992-1993 DEFENSE AUTHORIZATION REQUEST

The subcommittee met, pursuant to notice, at 10 a.m., in room SR-222, Senator Alan Dixon (chairman) presiding.

Committee members present: Senators Dixon, Lott, and Thurmond.

Professional staff members present: David S. Lyles.

Minority staff members present: Ronald P. Kelly and George W. Lauffer, professional staff members.

Staff assistant present: Mary J. Kampo.

Committee members' assistants present: Kenneth N. Luongo, assistant to Senator Levin; Charles C. Smith, assistant to Senator Dixon; Terence M. Lynch, assistant to Senator Shelby; Samuel D. Adcock, assistant to Senator Lott; and Eric H. Thoemmes, assistant to Senator Coats.

OPENING STATEMENT OF SENATOR ALAN J. DIXON, CHAIRMAN

Senator Dixon. Ladies and gentlemen, the Subcommittee on Readiness, Sustainability and Support meets today to begin our hearings on the fiscal years 1992-1993 defense authorization request.

I want to begin by welcoming two new members to the subcommittee. The ranking minority member of the subcommittee, Senator Trent Lott, is not new to the Armed Services Committee, but he is new to this subcommittee. Senator Connie Mack became a member of the Armed Services Committee this year and has recently been appointed to this subcommittee. I am delighted to have both of them on the subcommittee and I think they will find the subcommittee's work challenging and I know we will benefit from their advice and counsel.

The Readiness, Sustainability and Support Subcommittee has been given a broad charter by the full Armed Services Committee to oversee two critical measures of our military capability—the readiness of our military forces to carry out their assigned missions and the ability to sustain forces in a conflict.

I have served on this subcommittee for 7 years, the last 4 as chairman. During this entire time, the subcommittee has been a strong and bipartisan supporter of readiness and sustainability programs in the military services.

All of us on the subcommittee are extremely proud of the performance of the men and women of our military services in Operation Desert Shield and Operation Desert Storm. Their readiness to deploy last August, their long months of preparation and training before hostilities began, and the extraordinary skill and professionalism they demonstrated once combat began again demonstrated that the United States has the finest and most capable military force in the world.

The defense experts will be debating the lessons learned from the Persian Gulf conflict, I am sure, for years to come. In this Senator's view, the Persian Gulf conflict confirmed many of the points this subcommittee has been making for a number of years. Our military forces must be trained and prepared to deploy on short notice anywhere in the world. Tough, realistic training, and enough of it, are critical to developing and maintaining the skills our military men and women need to prevail in combat.

Logistics and support are very important to the outcome of combat. Our weapons systems in the Persian Gulf worked very well under extreme environmental conditions in large part because we invested in the spare parts to support these weapons systems and trained our maintenance personnel to keep them operating.

This subcommittee will continue to do everything we can to make sure these lessons are not forgotten in the coming months. All of us realize that the overall defense budget and the size of our military forces are going to be reduced this year and in the future. I intend for this subcommittee to play a constructive role in that process. We will suggest areas where savings can be achieved, but we will also insist that programs which are essential to maintaining a ready and capable force must be protected.

In our first two hearings we will receive testimony from the senior logistics commanders of each military service and the Defense Logistics Agency. Senator Lott and I asked the witnesses at these two hearings to outline the scope of their logistics support for Operations Desert Shield and Desert Storm, indicate how the fiscal years 1992-1993 defense budget will affect their capability to meet their wartime logistical support requirements, and discuss the ongoing implementation of the logistics management proposals and the Defense Management Review.

Later this month the subcommittee will have hearings on conventional ammunition programs and on the fiscal years 1992-1993 military construction program. Next month we will have hearings on operation and maintenance funding and on DOD environmental programs.

I want to welcome our witnesses to the subcommittee this morning. Rear Adm. Edward M. Straw is the Director of the Materiel Division in the Office of the Deputy Chief of Naval Operations for Logistics. Admiral Straw is standing in for Vice Admiral Stephen Loftus, the Deputy Chief of Naval Operations for Logistics, who had to leave Washington suddenly because of an illness in his family. I know, Admiral, you will express the concerns of my distinguished senior colleague from South Carolina, this Senator and others, to the Admiral concerning the health of his family.

Lt. Gen. Robert J. Winglass is the Deputy Chief of Staff of the Marine Corps for Installations and Logistics, and Lt. Gen. Charles McCausland is the Director of the Defense Logistics Agency. Gentlemen, we appreciate your being here this morning. Your full statements will be included in the record. We will have questions after you have given your oral testimony.

Before the witnesses begin, let me recognize the distinguished senior Senator from South Carolina, Senator Thurmond, who has been such a valuable member of this subcommittee and the committee. Do you have any opening statement?

Senator THURMOND. Thank you, Mr. Chairman. Mr. Chairman, I join you in welcoming our witnesses. As the chief logistics operators of our services, these officers are responsible for an extremely complex and costly business that too few in Congress and the public fully understand.

Mr. Chairman, there should be no doubt that the officers appearing before us today and their subordinates deserve a large share of the credit for the success of Operation Desert Storm. Although there have been glorious accounts of the Herculean logistic feats in the Persian Gulf region, the operation could not have been conducted had it not been for the support and planning of the offices appearing before us today.

General McCausland, Admiral Straw, General Winglass, I want to recognize your contribution to Operation Desert Storm. You and your staffs have done yeoman's service to our Nation and deserve our gratitude.

Now that you have successfully met the challenges of Desert Storm, you will be facing the challenge of the shrinking defense budget. I urge you to speak out forcefully to ensure that the logistic community continues to maintain its fair slice of the defense budget. Our combat forces will only be as capable as the logistic train that supports them.

Thank you, Mr. Chairman.

Senator DIXON. I thank the distinguished senior Senator from South Carolina. The distinguished ranking member of this subcommittee, Senator Lott of Mississippi, is here.

Senator LOTT. Thank you, Mr. Chairman. I have a prepared statement I would like to just submit for the record and welcome our witnesses here today. We are very interested in learning your opinions on what we learned from Desert Shield/Desert Storm and making some progress toward positive improvements.

Also, in my own opinion, I think we need very badly to hear your candid reaction to the projected cuts that we are going to be dealing with, what that is going to do to the defense logistics capabilities that served us so well during Desert Shield/Desert Storm, and I hope maybe we will ask the right questions and get the right answers from you to help you keep what you need to do your job.

Thank you, Mr. Chairman.

[The prepared statement of Senator Lott follows:]

PREPARED STATEMENT BY SENATOR TRENT LOTT

Thank you Senator Dixon.

I too would like to welcome the witnesses to this hearing today on the Department of Defense Logistics Programs for Fiscal Years 1992-1993 and Desert Shield/Desert Storm support.

We are at a major turning point in determining the national security requirements of the United States. In fiscal year 1992, we will provide the first year of direction and funding for the beginning of the reduction of U.S. military forces. This transition should be made with the utmost of care.

The United States enjoyed success in the Desert Shield/Desert Storm operation due to past policies and investments. We are now going to reverse a great deal of these decisions in fiscal year 1992. We should be very careful.

From the witness statements for the record, the current logistics and support organizations were major contributors to the Persian Gulf successes. These organizations will be substantially altered and/or eliminated within 2 to 3 years. Are we sure this is smart?

Another point, in the justification for the fiscal year 1991 supplemental funding, O&M and support costs were a large majority of funding. From the statements and budget briefings, it appears unlikely that the supplement funds will be obligated and/or expended by September 30, 1991. We should seriously consider extension of this date.

I look forward to the witnesses statements and questions to follow.

Senator DIXON. I thank the distinguished Senator from Mississippi.

Gentlemen, it would greatly accommodate the members of the subcommittee if you would limit your remarks to extend not in excess of 10 minutes. All of your statements will of course be completely reproduced in the record, but we find that we really gain a good deal of information that we need from our question-and-answer opportunity with you, and we would appreciate your accommodation.

Admiral Straw, would you proceed, please?

STATEMENT OF REAR ADM. EDWARD M. STRAW, DIRECTOR, MATERIEL DIVISION, OFFICE OF THE DEPUTY CHIEF OF NAVAL OPERATIONS FOR LOGISTICS

Admiral STRAW. Mr. Chairman and distinguished members, I do bring respects to all of you from Admiral Loftus and his regrets for being unable to be here this morning. I would like to add that because my focus in working for Admiral Loftus is in the fields of supply, spares, transportation, and ammunition, I have brought with me experts in the areas of maintenance programs and shore facilities programs—Admiral Richard Lang, and Admiral Patrick Drennon.

Mr. Chairman, I am honored and appreciate the honor to appear before you and the committee this morning to provide you with the Navy's logistic perspective on Operation Desert Storm, the fiscal years 1992-1993 defense authorization request, and the Defense Management Review.

I have prepared a statement that I will submit for the record and I would like to take a few minutes to summarize the contents of that statement.

First, I will address Desert Storm. I am pleased to be able to report to you that the Navy's logistics support system was ready and responded superbly to Operations Desert Shield and Storm requirements. Due in large part to the support of this committee throughout the 1980s, the ships, aircraft, equipment, personnel, parts and supplies were in place and capable of responding immediately when called for by the President.

The combination of our military and civilian teams, together with the contribution of our Reserves, enabled us to position and sustain a full range of in-theater logistics support capabilities, including maintenance, transportation, construction and supply support.

The readiness I just described to you was responsible for our being able to load out and deploy the largest naval force assembled since World War II, but this readiness would have been of little value had we not been capable of sustaining these forces. In this respect also our logistics system proved fully capable of responding when required.

From the inherent sustainability provided by our ships themselves to the in-depth backup support provided by our shore-based logistics infrastructure, as well as that provided by the commercial sector, we were fully prepared to continuously support our in-theater forces.

The proof of that statement is in the fact that throughout the period of both Desert Shield and Desert Storm we consistently sustained readiness levels at or above the Chief of Naval Operations' readiness goals. Clearly, the Navy's unique capability of maintaining our operating forces on a constant wartime footing paid off. To say this another way, when the balloon went up, our battle groups were on station or steaming to station fully loaded and ready to fight.

Now, with the cessation of combat operations, we are currently in the process of withdrawing our forces, returning equipment, rescheduling deferred maintenance, and reviewing inventories. At this time, we anticipate the costs associated with our Desert Storm efforts will be covered by the supplemental appropriation.

Let me next turn to the fiscal years 1992–1993 authorization request. This year's request reflects a continuation of the general downsizing initiated last year in response to the changing geopolitical and fiscal climate which we are currently facing. This downsizing includes a reduction in the number of battle force ships from 545 to 464 between fiscal year 1990 and fiscal year 1993. It also includes a reduction in the number of active carrier air wings from 13 to 11 over the same period.

In executing this downsizing in our force structure, we have structured a program which is designed to maintain the readiness and sustainability of our remaining forces. I will briefly highlight four logistics elements of our fiscal years 1992–1993 authorization request. Additional details on these four elements are available in my prepared statement.

Our operations and maintenance request has been structured in parallel with the planned force structure reduction I mentioned previously. We are continuing our efforts to incorporate increased efficiencies and improved productivity into our depot maintenance programs. In the case of ship depots, our strategy focuses on more frequent but shorter depot level availabilities; nonetheless, certain maintenance evolutions, such as periodic refueling of nuclear-powered ships and depot maintenance of complex weapons platforms, still require long-term overhauls. Several such overhauls are included in our request.

This change in the number and in the mix of complex overhauls results in an increase in our request for ship depot maintenance funding for the 2 years covered in this submission.

With regard to aviation depot maintenance, our strategy emphasizes streamlining, single-siting, consolidation of workload, and competition. We are working these issues closely with the other services and the OSD staff via a defense management review initiative on depot maintenance which I will address in a few moments. The projected savings associated with these initiatives are incorporated in our budget request.

You will notice a significant growth in the aviation depot maintenance backlogs in our request. Although these backlogs will not affect deployed readiness, they could impact on non-deployed squadrons if they materialize as currently programmed. We are concerned about this possibility and, as a result, are currently conducting an intensive internal management review of this issue to identify refinements and enhancements to current maintenance strategies which will enable us to arrest this growth and hold backlogs at acceptable levels.

Our facilities request also takes into account the overall downsizing of our battle forces. Our decisions in this area have been guided by the need to invest wisely in maintaining a core infrastructure which is capable of supporting our forces and providing quality of life for our people.

We have also been careful in making these decisions that we are in full compliance with the provisions of the Base Closure and Realignment Act of 1990. The program we are requesting is consistent with today's funding climate and includes only support needed to meet our most essential requirements.

Overall, we are proposing funding levels which will slow the growth in the backlog of facility maintenance and repair, fund our base operations at a level which will enable us to maintain support to operating forces and our people, and provide minimum levels of construction to provide new mission and new weapon system support.

Turning now to our supply operations and spare parts request, during last year's testimony Admiral Arthur, who, as you are aware, is the commander of coalition naval forces in-theater, advised you that key indicators of supply performance at our naval supply centers and inventory control points had started to decline. I am pleased to report that the trend leveled off in fiscal year 1990. This fact, together with our success in supporting Operation Desert Shield and Desert Storm requirements, has led us to conclude that the additional flexibility that we gained from stock-funding our supply operations beginning in fiscal year 1990 is paying dividends.

We are devoting extensive management attention to inventory management, a subject in which I am well aware you have high interest, Mr. Chairman. During fiscal year 1990, overall supply systems inventories were reduced from $32 billion to $29 billion. The long supply portion of the inventory has declined from $11.9 billion to $9.8 billion, and $2.8 billion of excess material has been processed for disposal.

We are also seeing the results of our inventory improvement initiatives in spares requirements reductions. For fiscal year 1991, our wholesale supply system spares requirements have decreased 17 percent from those projected in fiscal year 1990. This decrease is a result of aggressive action to cancel requirements for inactivation, reduce procurement lead times and safety level stocks, and introduce more conservative policies on the timing and quantity of spares bought to support new weapons systems.

We have incorporated these types of reductions into our fiscal years 1992-1993 stock fund budget requirements. We are confident continued success in these areas will enable us to maintain spares availability at current rates.

The fiscal years 1992-1993 request for conventional ordnance supports our readiness requirements through continued investment in peacetime training ordnance. It also provides for future sustainability by continuing our program of building war reserve stocks of modern weapons.

Lessons learned from Operation Desert Shield lead us to believe that we will want to increase our emphasis on procurement of advanced technology weapons, and I expect this change will be reflected in future budget requests once we have had adequate opportunity to fully assess our Desert Storm experience.

In the interim, we are already planning to introduce several advanced level of effort bomb and rocket systems, as well as some new threat weapons during the fiscal years 1992-1993 timeframe.

I would summarize this year's authorization request with the comment that we in the logistics community recognize the significant challenge we have in front of us. Restructuring our support infrastructure to accommodate our reduced funding levels while maintaining or improving overall readiness and sustainability will indeed be challenging. However, we are serious about finding innovative approaches which will enable us to accomplish this goal, and we believe we are making significant strides in doing so.

Switching to the Defense Management Review and my final section, sir, the most visible program for identifying such new approaches to management is the Defense Management Review, known as the DMR. The Navy is committed to aggressively pursuing DMR initiatives and is playing an active role in identifying and implementing them.

Progress on implementation of various DMR initiatives is proceeding on schedule. Since most are not programmed to produce savings until 1992, it is premature to provide an assessment on their success. However, we are progressing satisfactorily on our planned implementation schedules and making adjustments when such adjustments are called for. We are pleased with our progress to date.

I would like to specifically address the two initiatives cited in your letter, Mr. Chairman—consolidation of supply depots and consolidation of depot maintenance. The supply depot consolidation initiative will ultimately result in the transfer of all continental United States supply depot distribution functions—those of receiving, shipping, issuing, packing and storing supply system inventories—to the Defense Logistics Agency (DLA).

The first of our depot distribution activities was transferred to DLA in June 1990 as part of a prototype consolidation in the Oakland Bay area. We are currently finalizing plans for the transfer of our remaining continental U.S. depots, with the transfer of the final depot anticipated in fiscal year 1993. The consolidation plan calls for savings to be achieved through reduced overhead, improved capacity utilization, implementation of standard automated systems, reduced transportation costs, and reduced capital investment costs.

We are working closely with DLA to ensure that critical readiness support provided by these activities is not interrupted during and following this functional transfer.

The depot maintenance consolidation initiative is designed to better utilize the overall Department of Defense depot maintenance capabilities while reducing the cost of operations. It incorporates savings in six primary areas—streamlining of depot operations, single site rework and overhaul, consolidating component repair and other maintenance workloads, increased inter-servicing, increased competition of maintenance workload, and increased maintenance productivity.

The Defense Depot Maintenance Council has been created to oversee the implementation of this initiative, and plans are proceeding on schedule. Admiral Loftus is a member of that committee, sir. In June of this year, individual service depot business plans will be submitted to the Council for review and approval.

In conclusion, Mr. Chairman, I would like to close my remarks again by thanking the committee for the support it is providing in enabling us to acquire, staff, and support the naval forces and supporting logistics infrastructure which responded so well in Operation Desert Storm and remains ready to respond again today, if needed. As we enter the changing political and fiscal climate of the 1990s, we are committed to maintaining that capability.

I will be happy to respond to your questions at this time, sir.

[The prepared statement of Admiral Loftus follows:]

Prepared Statement by Vice Adm. Stephen F. Loftus, U.S. Navy, Deputy Chief of Naval Operations (Logistics)

Mr. Chairman and distinguished members of the committee, I appreciate the opportunity to appear before you and provide the Navy's logistics perspectives on Operation Desert Storm, the Fiscal Year 1992/93 Defense Authorization Request and the Defense Management Review.

OPERATION DESERT SHIELD/STORM

I will begin by addressing logistics support of Operation Desert Storm. At the outset, I am pleased to be able to report to you that the Navy's logistics support system was prepared for and responded magnificently to the requirements of Operation Desert Storm. As I will detail in my remarks, our logistics system contributed significantly to the achievement and sustainment of exceptionally high readiness levels throughout the conflict. That readiness is being sustained by the Navy forces which remain in the region today. As our forces return from operations in the Gulf, our attention is now shifting from combat support to reconstitution of the equipment and material consumed during our 7 months in the Gulf. My remarks will also address this aspect of Desert Storm support.

Let me first clarify why the Navy was able to respond so quickly and effectively to the Desert Shield and Desert Storm requirement. It boils down to four primary factors: the readiness of our forces, both Active and Reserve, afloat and ashore; the inherent sustainability of naval forces; the logistics pipeline to the Persian Gulf area established as a result of our previous operating experience in that theater;

and the effectiveness of the shore based and commercial industrial support we received. Let me explain each of these in a little more detail.

Readiness. Since initially being called upon to supplement our Persian Gulf presence in August, the Navy has outfitted and deployed a naval force larger than any deployed since World War II. Our ability to accomplish this undertaking can be traced directly to the strong support of this committee. It has been that support which provided the right number and mix of ships which were properly manned, maintained, and logistically supported to enable us to quickly and effectively surge the forces called for by the President. Our success can also be traced to the dedicated efforts of thousands of military and civilian personnel, both Active and Reserve, ashore and afloat, whose combined efforts ensured our ships and aircraft were ready and properly outfitted for sustained combat operations.

The Navy's unique status as the service which continually operates on a wartime footing enabled us to accomplish our Desert Shield surge with little fanfare. You did not read much in the media about Navy preparations for Desert Shield because we did what we do 365 days a year, which is to deploy ships and aircraft fully ready to conduct and sustain combat operations wherever and whenever called upon to do so. You did not hear much about the shipment of Navy material to the Persian Gulf theater because over 98 percent of the material and equipment required to support naval operations was carried by our own ships.

Clearly the system responded and responded superbly. The proof is that, despite the magnitude of this undertaking, Navy forces were ready to respond to the Commander in Chief's taskings, and readiness rates consistently met the Chief of Naval Operation's goals throughout the conflict.

Sustainability. Our ability to sustain these exceptional readiness levels was a direct result of the inherent afloat sustainability uniquely attributable to naval forces. By inherent afloat sustainability, I am referring to the sustainability provided by our ships themselves, the battle groups in which they operate, and the additional layer of sustainability provided by our combat logistics force and auxiliary support ships. As an example, our ships carry shipboard and aviation spare parts allowances designed to allow them to sustain operations for 7 months in combat. This sustainability is further enhanced by other ships in the battle group through the exchange of spare parts, when necessary. Our combat logistics force ships extend that sustainability by carrying tailored loads of frequently demanded parts and other consumable material. This combination of own ship, battle group and combat logistics force inventories extends our on station sustainability considerably.

Logistics Pipeline. Supplementing the afloat sustainability I just described is a logistics pipeline which links our forces to in-theater shore-based support, as well as to out-theater support in both the Western Pacific and continental United States in as little as 2 days. This logistics pipeline existed prior to Operation Desert Storm, as a result of our recent experience in the Gulf in conjunction with the Operation Earnest Will tanker escort missions which began in 1987. The combination of these various echelons of support provided the Navy sufficient logistics capability to sustain combat operations as long as required to bring Desert Storm to a successful conclusion.

I mentioned in-theater shore based support. Because of the magnitude of the naval forces involved in Desert Storm, the support role the Navy provides to Marine Corps ground based units, and the distances from our primary overseas and continental U.S. resupply points, we increased our shore presence in the Persian Gulf area. This increase was effected almost exclusively through the introduction of Navy reservists. Over 19,000 Reserve officer and enlisted personnel were ultimately activated in four primary areas: material distribution, construction, medical and sealift support. The vast majority of these personnel were either in theater or supporting the logistics pipeline between our continental U.S. sources and our deployed forces. Their duties ranged from in-theater fuel quality assurance to warehouse personnel augmenting the work force of our supply depot in Subic Bay. They were assigned duties for which they were already specifically trained. Among those called up were six cargo handling battalions, three mobile construction battalions, two fleet-hospital support units, and two supply depot units. In all cases, these dedicated reservists performed superbly.

In addition to this personnel augmentation, we expanded our logistics infrastructure in support of Operation Desert Storm. Ninety eight strategic sealift ships were activated to support the growth in cargo movement and other logistics support requirements. Included in this activation were 13 maritime prepositioned ships, two hospital ships, and two aviation support ships positioned to provide intermediate maintenance support to Marine Corps aviation units. In addition, three fleet hospitals were positioned and activated, two new air channels were established with the help of the Military Airlift Command to support the Red Sea operating area, five ship repair tenders and a selected combat stores ship load of provisions and high usage consumables was positioned in-theater, commercial maintenance support arrangements were expanded in theater, fuel and ammunition storage capabilities were supplemented, and the frequency of both airlift and sealift service to Persian Gulf ports was increased.

Shore-Based and Commercial Industrial Support. Our mobilization efforts were by no means limited to in-theater support. The response from our continental U.S. shore based logistics infrastructure as well as the commercial sector was equally impressive. Our military-civilian team responded to surge requirements in such diverse areas as supply depot warehouse operations, ship repair, ordnance station load out of sealift, and aviation depot engine component rework. The commercial sector responded with the cooperation we needed to mobilize the industrial base sufficiently to respond to the unique aspects of combat in a desert environment.

I would like to amplify that last point. Although our afloat units were not as susceptible to the environmental aspects of desert warfare as our sister services' ground combat units, we did experience some increased component demand associated with the effects of sand abrasion and heat, primarily in our mission of supporting Marine Corps aircraft. In anticipation of this increased demand, our inventory control points set up special Desert Storm arrangements with several major manufacturers including expanded ordering agreements; modified delivery schedules; identification of surge capability; establishment of electronic mail communications for priority requirements; and the creation of joint fleet, maintenance, supply and manufacturer working groups to resolve problems as they developed. These actions were successful in absorbing as much as seven-fold increases in demand in component areas such as compressor rotor blades and vanes, turbine nozzles, carbon seals and turbine shrouds. This success could not have been achieved without the cooperation and support of the commercial sector.

Post War Reconstitution. Having completed combat operations in the Gulf, the majority of our forces have returned home or are in the process of withdrawing. Today, our in-theater forces represent approximately 35 percent of those that were present at the height of the conflict.

This withdrawal and return to peacetime operations has presented us with several challenges with which we are now dealing. War reserve material issued to our Reserve forces is being inspected, repaired and returned to war reserve inventories. Advance base functional components such as our fleet hospital units are being returned, inspected, reconstituted and returned to storage. Aircraft, ships and ordnance maintenance workload deferred during the war effort is being reevaluated and rescheduled to place our maintenance production efforts back on a peacetime support schedule. Inventories of spare parts and ordnance expended during the conflict are being reviewed and replenishment/repair decisions made based on a determination that future requirements justify such action.

At this time, we anticipate all of the costs associated with our Desert Storm efforts will be covered by supplemental appropriation. As I mentioned previously, we are still in the process of identifying the full scope of Desert Storm funding implications and will keep the Congress informed of any requirements which exceed the authority currently available in supplemental legislation.

THE FISCAL YEAR 1992/93 DEFENSE AUTHORIZATION REQUEST

I will now address the Fiscal Year 1992/93 Defense Authorization Request. Let me begin by describing the basis on which our request was structured.

As you know, changing global developments and a revised fiscal climate have driven a rebalancing of the manner in which we structure our military forces. The combination of the reduced threat of global war with the Soviet Union, the increase in the number of countries acquiring sophisticated military capabilities, the instability being manifested in several regions of the globe, and the fiscal realities back home have necessitated this rebalancing. The fiscal year 1992/93 Navy budget represents the end product of a decisionmaking process which weighed each of these competing elements and arrived at the combination of forces and associated support structure best able to meet our needs. Although the budget reflects a continued decline in the defense appropriations, we feel it is sufficient to adequately sustain the readiness and sustainability of the force structure programmed over the budget period.

READINESS AND SUSTAINABILITY TRENDS

Last year my predecessor, Vice Adm. Stan Arthur, currently Commander Naval Central Command and Commander Seventh Fleet, presented an overview of the various readiness and sustainability indicators we monitor to assess our current ability to meet peacetime and wartime requirements with our ships and aircraft. I would like to review some of those indicators with you as a means of reporting on our fiscal year 1990 experience.

Figure 1

OVERALL READINESS TREND (USING FY-85 AS A BASE)

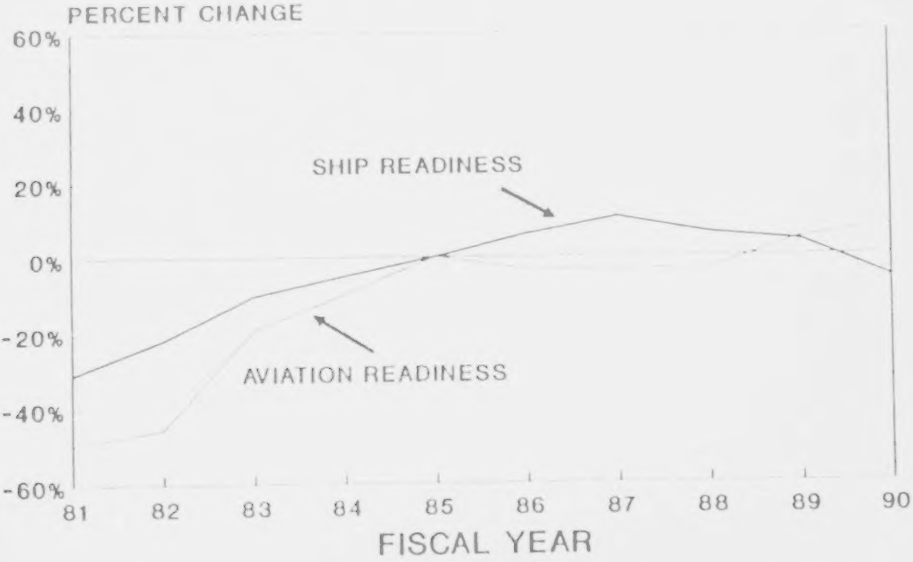
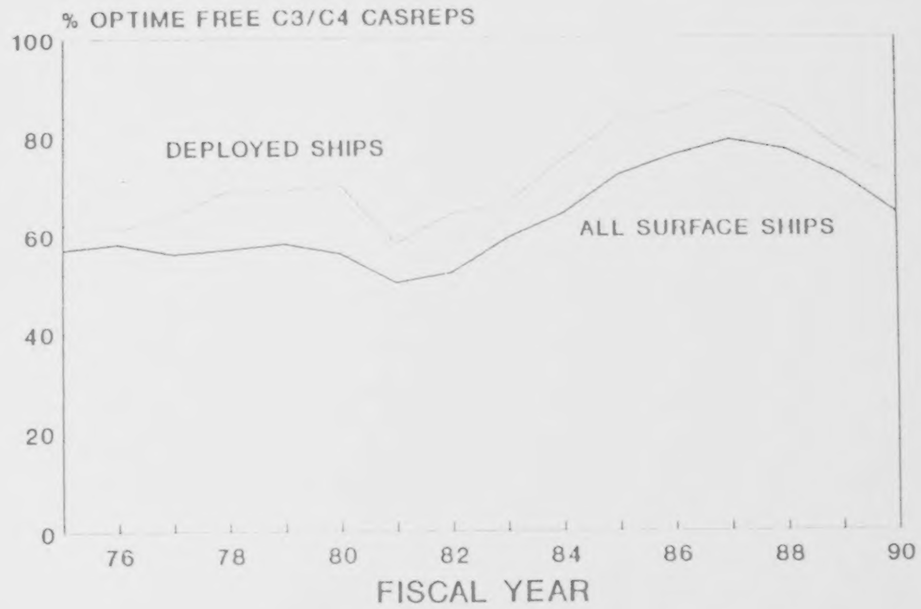


Figure 1 reflects the general trend in our unit commanders assessments of their overall status. It includes both objective and subjective measures of the status of the organic resources under the operational control of each unit. Specifically, these resources include personnel, equipment, supply support, and training. It does not address all the elements external to the individual unit which impact on readiness, such as depot maintenance capabilities, supply support capabilities and other fleet support elements. As displayed, aviation readiness reflects a slight increase over fiscal year 1989 while ship readiness reflects a decrease. The majority of the ship readiness decrease was attributable to a single problem I will describe shortly, which has since been corrected.

Figure 2

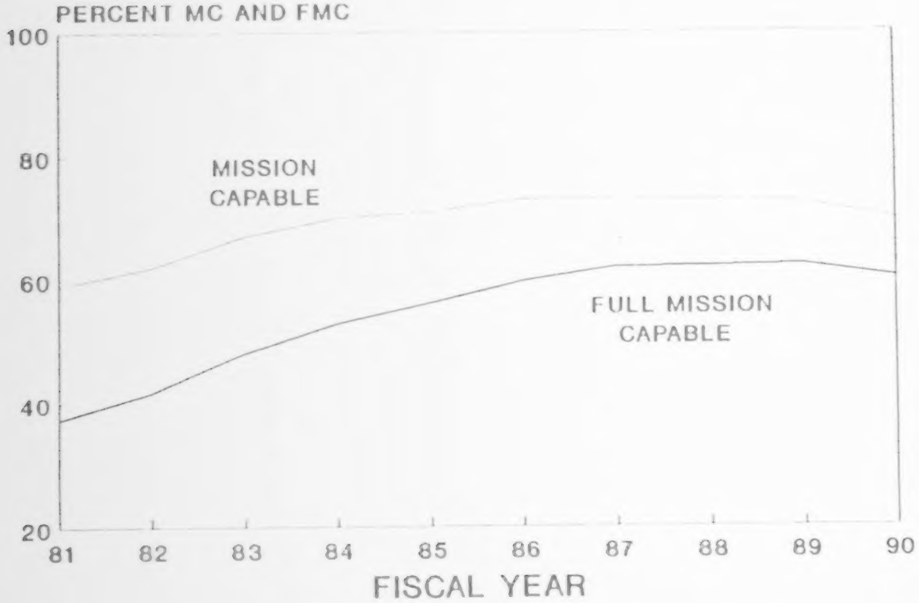
SURFACE SHIP MATERIAL READINESS



Ship Material Readiness. Figure 2 reflects trends in surface ship material readiness. It is measured in terms of the amount of operating time a ship is free of significant mission degrading equipment casualties; thus, this chart focuses on that element of overall ship readiness related to the status of shipboard equipment. As you can see, ship material readiness has continued its decline. It was this decline which drove the overall drop in ship readiness reflected on the previous slide. Fortunately, the majority of the fiscal year 1990 decline was attributable to a single equipment software problem we experienced on a piece of electronic countermeasures equipment with wide fleet application. That problem has since been corrected and first quarter fiscal year 1991 reports show our ship material readiness to be improving.

Figure 3

AVIATION MATERIAL READINESS

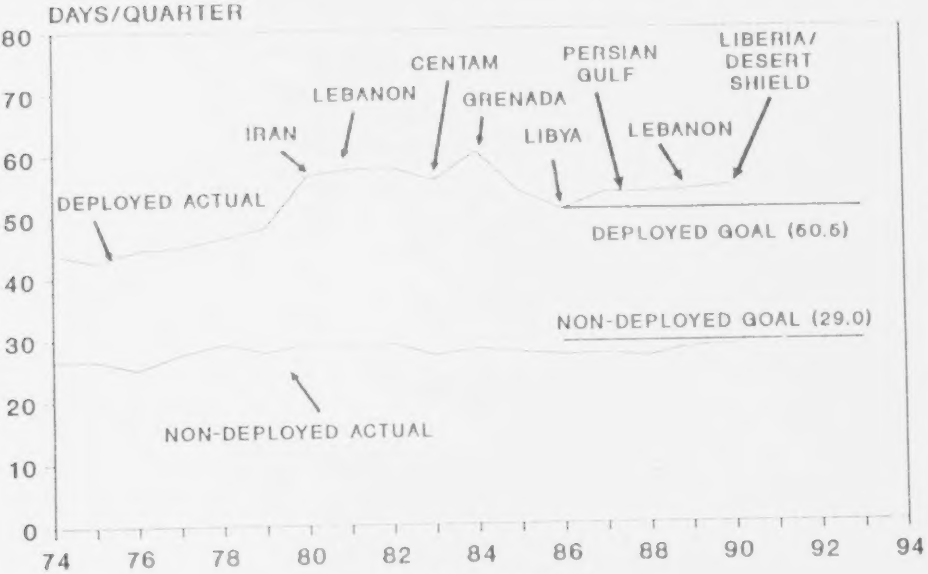


Aircraft Readiness. Figure 3 reflects trends in aircraft readiness. It is measured in terms of Mission Capable (MC) and Full Mission Capable (FMC) rates based on actual fleet maintenance data. These rates reflect the period of time an aircraft is ready for safe flight, and is able to perform all of its missions (FMC) or at least one of its missions (MC). Currently programmed (MC) and (FMC) rates are projected to remain relatively stable into fiscal year 1993, and within acceptable limits.

OPERATIONS AND DEPOT MAINTENANCE

Ship Operations. Between fiscal year 1990 and fiscal year 1993 the number of battle force ships will fall from 545 to 464. The Navy budget request has been structured in parallel to ensure that as this downsizing in force structure is executed we will continue to provide sufficient operations and maintenance funding to maintain existing readiness and sustainability levels for the force structure which remains. As a result, our budget request includes provisions for average operating tempo (OPTEMPO) for Active forces of 50.5 days per quarter for deployed ships and 29 days per quarter for non-deployed ships. Approval of this level of operations will enable us to both maintain a forward deployed presence and fiscal year 1991 levels of fleet readiness, safety and war fighting proficiency of our crews for the force structure included in our request. Historical ship operating levels are displayed in Figure 4.

Figure 4
SURFACE SHIP OPTEMPO



Ship Depot Maintenance. A fundamental change in ship maintenance philosophy over recent years has led us to shift from long overhaul availabilities to more frequent, shorter depot level availabilities. Approximately 75 percent of our surface ships are in a maintenance strategy which does not require regular overhauls. Those surface ships which will require overhauls are principally those with complex combat systems suites and/or nuclear propulsion. We are continuing our focus on the selection of repairs accomplished during maintenance availabilities to ensure only those repairs necessary to sustain full equipment capabilities are identified and authorized for accomplishment.

Our request reflects an increase in ship depot level repair funding of $88 million over that provided in fiscal year 1991. Although the number of overhauls is down from 13 in fiscal year 1991 to 9 in fiscal year 1992, this increased authorization is needed because more expensive overhauls are programmed in fiscal year 1992 (notably the complex overhaul of U.S.S. *Forrestal* (CV-59), and the refueling overhaul of U.S.S. *Texas* (CGN-39)). Fiscal year 1993 funding increases another $429 million to support eight additional overhauls, including the first refueling of a U.S.S. *Ohio* class (SSBN-726) and a U.S.S. *Los Angeles* class (SSN-688) submarine.

The proposed ship depot maintenance program has been priced on the basis of achieving significant economies in the operation of Navy shipyards. These economies are expected to result from our efforts in implementing the defense management review initiative on maintenance depot operations which I will discuss later.

Workload at our eight naval shipyards will continue to decline over the next several years due to accelerated ship decommissionings, changes in maintenance strategies, and the introduction of newer ships which require less depot maintenance than their predecessors. We anticipate a reduction of our overall naval shipyard work force as a result. Employment levels are expected to decline from fiscal year 1990 levels of 66,000 to approximately 61,000 by the end of fiscal year 1991, and as low as 51,000 by the end of fiscal year 1993.

During fiscal year 1990 there were 44 private shipyards involved in Navy maintenance and modernization work. The decline in overall ship depot maintenance workload is expected to affect these yards as well. This decrease, combined with an overall decline in the U.S. shipbuilding industry, will continue to diminish our private sector repair capabilities and our already limited industrial base. We continue to be concerned about this trend because Navy work alone will not be enough to assure a strong future for our shipbuilding and repair commercial industrial base.

Aircraft Operations. Between fiscal year 1990 and fiscal year 1995 the total number of aircraft carriers, including the training carrier, will decline from 16 to 13, with a corresponding reduction in carrier air wings. As in the case of ship operations, we have structured our fiscal year 1992/93 budget request in parallel to ensure we provide appropriate operations and maintenance funding to sustain the aviation readiness of these reduced force levels. The budget request provides for a flying hour program of 85 percent Primary Mission Readiness (PMR) (24 hours of flight time per crew per month). This funding level represents the amount required to maintain aircrew proficiency and safety of flight and is consistent with fiscal year 1990 program execution.

Aviation Depot Maintenance. We are continuing our efforts to incorporate increased efficiencies and improved productivity into our aviation depots. The majority of these efforts are now tied to the defense management review initiative on depot maintenance. Many actions are underway and have been incorporated into a revised aviation depot business strategy which we are now executing. The main features of this revised strategy are streamlining, single siting, and consolidation of workload, all of which are anticipated to result in substantial cost reductions which have already been reflected in our authorization request.

A major component of the workload included in our fiscal year 1992/93 request is aircraft rework. This rework results from operational aircraft that fail a material condition inspection and, as a result, are inducted into rework if funding is available. If funding is not available, aircraft are placed in the depot backlog. Some of these backlogged aircraft have material discrepancies which do not impact safety of flight and are therefore allowed to remain operational for up to a 90 day period. Those which are not safe to fly and those which exceed the 90 day grace period are grounded awaiting rework. Funding constraints kept 28 aircraft in backlog in fiscal year 1989, 68 in fiscal year 1990, and a projected 123 in fiscal year 1991. This 1991 projection excludes any additional requirements generated by Desert Storm operations. A limited amount of backlogged aircraft is acceptable because it allows our depot commanding officers to balance their workload with available resources. However, the growth in the backlog reflected in the current program has us concerned. Although the backlogs will not impact deployed aircraft readiness, they could impact non-deployed squadron readiness and aircraft availability if not reversed. A similar backlog problem exists in fiscal year 1992/93 aircraft engine and missile rework. As a result, we are currently conducting an internal management review focused on identifying productivity enhancements, workload distribution improvements and component maintenance strategy refinements which will arrest this growth and hold backlogs at acceptable levels.

FACILITIES

Turning next to shore facilities, I mentioned that the number of battle force ships will be downsized about 15 percent by the end of fiscal year 1993. In conjunction with this downsizing we are taking action to reduce our shore infrastructure commensurately. Recognizing there is not necessarily a linear relationship between force and facility reductions because of the need to maintain support for fleet services, operating TEMPO and mobilization requirements, we have undertaken an intense review of the entire naval shore establishment. In conducting this review we are remaining consistent with the provisions of the Defense Base Closure and Realignment Act of 1990. Our recommendations to the bipartisan commission will soon be announced. I anticipate the Secretary of Defense's recommendations to the Defense Base Closure and Realignment Commission will be announced today.

Base Operations. As we reduce the Navy's shore establishment it is important that we invest wisely in the remaining core infrastructure to ensure we remain capable of providing required support to our operating forces and quality facilities for our people. It is for this reason that we are particularly concerned about the growth in the backlog of essential maintenance and repair which is now projected to be over $2.2 billion in fiscal year 1992. This upward trend signifies a generally declining condition in our facilities plant, which now has an average age of 43 years. We have requested $791.8 million for real property maintenance in fiscal year 1992 and $544.1 million in fiscal year 1993. These amounts are consistent with the present fiscal climate and represent the absolute minimums necessary to meet our most essential requirements. Even with approval of this requested level of funding, we project that the backlog of needed facility repairs will continue to grow. I should note that the fiscal year 1992 and 1993 real property maintenance amounts cannot be directly compared because, beginning in fiscal year 1993, $422 million major repair and minor construction projects previously requested under the operations and maintenance appropriation are in the military construction appropriation. This places facility investment in the same appropriation.

Although we are facing severe constraints in the maintenance and repair accounts, our base operations support request has remained relatively constant. We are seeking $2,656.4 and $2,662.4 million in fiscal year 1992 and 1993, respectively, as compared to $2,649.3 million provided us in fiscal year 1991. The following table summarizes our base operations request:

Base Operations Request Summary

[Millions of dollars]

	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Base operations	$2,649.3	$2,656.4	$2,662.4
Real Property Maintenance			
O&M(N) account	833.2	791.8	544.1
MILCON account	N/A	N/A	463.0
Total base operations request	$3,482.5	$3,448.2	$3,669.5

Military Construction (MILCON). In fiscal years 1992 and 1993, the Department of the Navy is requesting $657.8 million and $745.1 million, respectively, for military construction. Because of the changes in the manner in which MILCON and real property repair and minor construction are treated in the Fiscal Year 1992/93 Authorization Request, these amounts are not directly comparable to the Navy's fiscal year 1991 request of $1,132.6 million. The following table outlines the manner in which these funding categories are addressed in this year's request:

MILCON Request Summary

[Millions of dollars]

	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Conventional MILCON	$1,132.6	$657.8	$172.7
Real property repair and minor construction	N/A	N/A	572.4
Total appropriation request	$1,132.6	$657.8	$745.1
DBOF request	N/A	221.6	41.2
Total MILCON request	$1,132.6	$879.4	$786.3

The shifting of real property repair and minor construction requirements from the operations and maintenance account to the MILCON account is reflected above, as I mentioned previously. Also reflected is the military construction costs which are now to be funded from the Defense Appropriation bill under the Defense Business Operations Fund (DBOF).

The Navy's total fiscal year 1992 authorization request of $879.4 million is $253.2 million less than our fiscal year 1991 request. It provides the minimal essential facilities for new mission and new weapon systems, while providing increases for facilities that directly enhance quality of life, the replacement and modernization of existing facilities and the Navy's ability to support its operational forces. The fiscal year 1993 request includes only those critical projects which could not be deferred beyond fiscal year 1993.

Family Housing Program (FHP). The Department of the Navy total fiscal year 1992 request of $879.9 million reflects some growth (1.6 percent) over that received in fiscal year 1991. The fiscal year 1993 request of $792.9 million is an 8.5 percent decrease from the fiscal year 1991 request of $866.0 million.

The fiscal year 1992 request provides for: 510 new homes at three locations (100 at Point Mugu/Port Hueneme, 260 at San Diego, 150 at Camp Pendleton); demolition funding in preparation of new construction; and $55.4 million in improvement projects. The significant drop in funding between the fiscal year 1992 request and that requested for fiscal year 1993 is a result of the MILCON pause. Thus, the fiscal year 1993 request has no new construction and only $2.0 million in improvements. The budget does include $72.9 million in fiscal year 1992 and $108.8 million in fiscal year 1993 to support build-to-lease and foreign leasing programs.

SUPPLY OPERATIONS AND SPARES

Supply Operations. Admiral Arthur advised you at last year's hearing that key indicators of supply performance at our Naval Supply Centers (NSCS) and Inventory Control Points (ICPS) had started to decline in recent years from record performance levels in the mid-1980s. He indicated that our approach to reversing this trend was focused on transferring the supply operations funding responsibility to the Navy stock fund.

I am pleased to advise you that the declining trend leveled off in fiscal year 1990. For example, overall Navy COG wholesale availability in fiscal year 1990 was maintained at the 80 percent rate achieved in fiscal year 1989. This leveling off, combined with our success in supporting Operation Desert Storm indicate the additional flexibility inherent in stock funding supply operations at our supply centers and inventory control points is paying off.

Our current challenge is related to implementation of the Defense Management Review Decisions (DMRDS) which simultaneously impact the operations of our supply centers and inventory control points, as I will describe shortly. We support the management improvements which are linked to these initiatives but recognize that their implementation will tax our ability to maintain existing levels of supply support to our operating forces. We are dedicating our best people to the management challenge of planning and executing these initiatives. The success of many of these initiatives is tied to proposed ADP modernization initiatives, support for which is solicited from the Congress.

Spare Parts. The size and perceived degree of usefulness of DOD's inventories continues to draw a great deal of scrutiny. While this area warrants and receives top level attention throughout DOD and in the Navy, I believe that there are several misconceptions that I would like to address.

One misconception is that inventory growth, particularly in the long supply portion that exceeds near-term requirements (next 24-30 months), reflects "bad buys" and a process that is "out of control." On the contrary, the vast majority of Navy's inventory growth in the 1980s was a result of (1) replenishment of stocks depleted in the late 1970s, (2) natural growth associated with the introduction of more complex weapon systems and the overall growth in force structure experienced in the 1980s, and (3) the retention in supply system stock of over $9 billion of material returns from customers as a result of fleet modernization efforts and an imposed freeze on disposal actions. In the latter case, we estimate that retention of this stock—much of which had served its useful life and was no longer serviceable, but was required to be valued on the books at full price—was the cause of over 80 percent of our long supply inventory balance in 1989. In that regard I am pleased to report that our total supply system inventory declined in 1990, from $32 billion to $29 billion, and that the long supply portion also dropped significantly, from $11.9 billion to $9.8 billion. This improvement was a direct result of actions undertaken through our formal flag-level inventory management improvement program which we initiated in late 1988 specifically to focus on action required to reduce existing inventory levels and to cope with anticipated spares funding levels in the 1990s.

A second misconception is that we still are not serious about reducing our inventory levels. Nothing could be further from the truth. The Navy continues to take a proactive role in developing new initiatives designed to reduce inventory levels. In that regard, our fiscal year 1991 wholesale supply system spares funding requirements have been reduced by 17 percent from those projected in fiscal year 1990. This reduction is a result of aggressive action to cancel stock dues in support of ships now slated for decommissioning; reduce procurement lead times and related inventory requirements; cut the size of replenishment buys; reduce or delay buys in support of new weapons; and undertake a myriad of other actions to trim requirements. These types of reductions are perpetuated in the fiscal year 1992/93 request.

To date we have been able to pursue these programs while maintaining spares availability as I previously described. Although it will be difficult, we believe we can maintain spares availability at or near the 80 percent rate, despite currently programmed reductions in inventory levels and funding. However, we also feel our success in these efforts will be linked to our having the flexibility to manage our inventories without the imposition of external limitations, and we request your support in that regard.

CONVENTIONAL ORDNANCE

Conventional Ordnance. The conventional ordnance program in our fiscal year 1992/93 authorization request was developed under the same funding philosophy as past requests. The plan supports our readiness requirements through continued investment in peacetime training ordnance. It also provides for future sustainability by continuing our program of building war reserve stocks of modern weapons.

The lessons of Operation Desert Storm have driven home the need for some adjustments to our ordnance investment priorities to increase emphasis on the procurement of advanced technology weapons although the Desert Storm supplemental will allow us to replace those inventories expended during the conflict, it is likely the post conflict reviews now underway will cause us to make some adjustments to the mix of future requests.

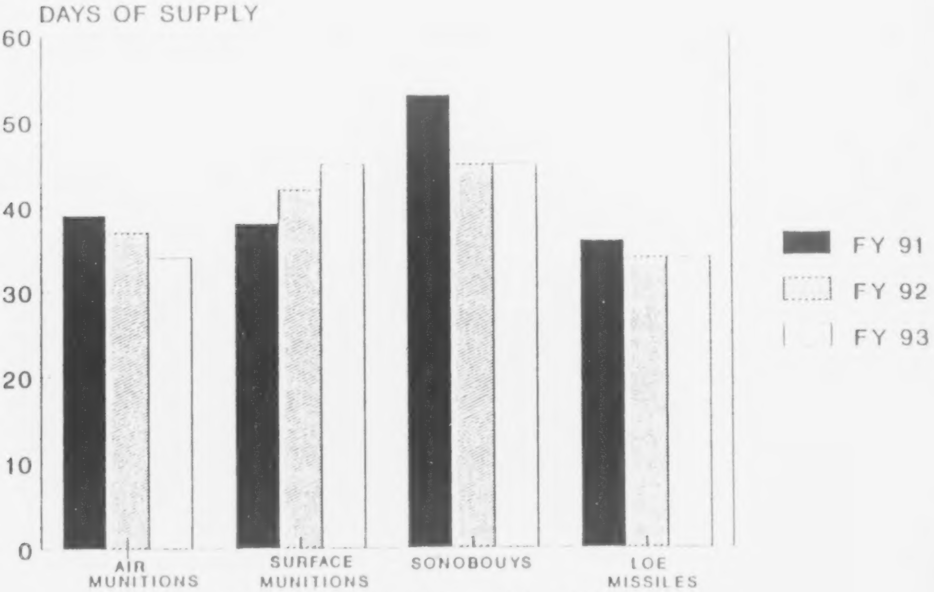


Figure 5 Level of Effort Munitions

Days of Supply

Funded Delivery Period

Figure 5 displays our fiscal year 1992/93 procurement plan for level-of-effort ammunition in terms of days of supply. Between now and fiscal year 1994, we plan to introduce the advanced bomb family, the advanced rocket system and their associated accessories.

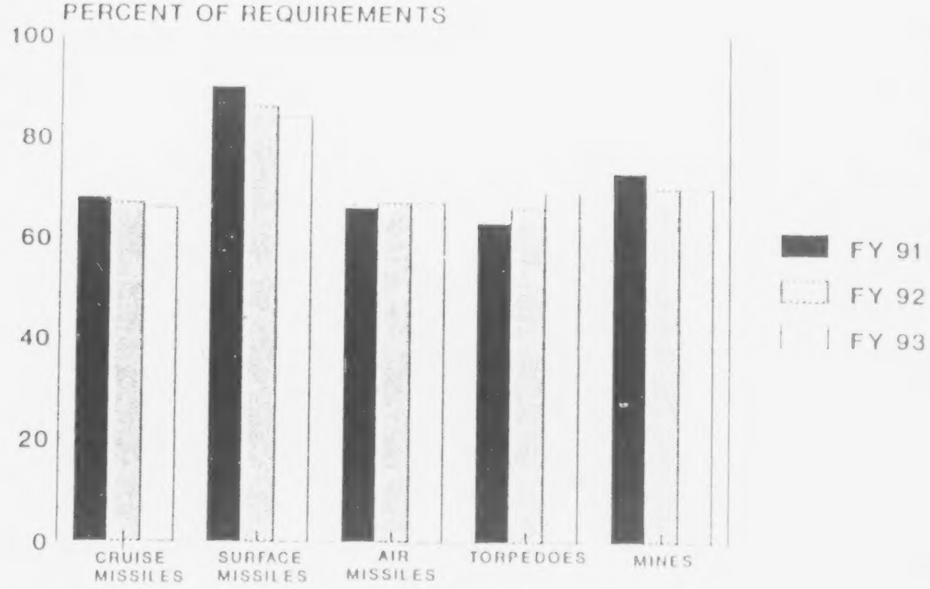


Figure 6 Preferred Threat Munitions.

Percent of Requirements
Funded Delivery Period

Figure 6 displays the percent of war reserve programming objectives attained with the fiscal year 1992/93 procurement for threat weapons. New weapons to be introduced during the fiscal year 1992/93 timeframe include the advanced medium air-to-air missile (AMRAAM) and the MK-50 torpedo.

DEFENSE MANAGEMENT REVIEW (DMR)

I will now address your request for a report on the implementation of Defense Management Review Initiatives. At the outset I can assure you the Navy is committed to aggressively pursuing DMR initiatives and is playing an active role in the overall Department of Defense DMR program. We see the DMR as a department-wide opportunity to identify cost saving efficiencies which will help us maximize the value of the funds provided us while improving the overall performance of our support establishment.

To date, the Department of Defense has completed two rounds of DMR reviews, one associated with the fiscal year 1991 budget and one with the fiscal year 1992/93 budget. An in depth summary of all DMR initiatives and the individual service involvement in each was recently provided the Congress in the form of the fiscal year 1991 and fiscal year 1992 DMR justification books. As a result, I will not go into great detail on individual DMR initiatives. I would like to highlight a few of the key initiatives which have significant impact on the logistics support infrastructure.

Supply System Costs. This initiative provides increased flexibility within our supply system to affect cost saving improvements in daily supply operations decisions. Supply system flexibility has been enhanced by (1) placing supply operations costs within the same revolving fund which funds our stock funded acquisitions, thereby improving the ability of our depot and inventory control point managers to respond to changes in workload within the system; (2) increasing our ability to award multiple year contracts, thereby providing us the ability to capitalize on the savings associated with larger acquisitions when such acquisitions are consistent with our experienced demand and can generate significant savings; (3) providing for the funding of drawings, technical data, forgings and castings within the stock fund, thereby enabling us to directly procure these items when such action will lead to overall system savings in follow-on procurements; and (4) providing increased visibility of retail level stocks to our wholesale inventory managers, thereby ensuring we obtain full utilization of existing inventories at all levels before initiating wholesale level replenishment actions. Implementation of this initiative commenced on 1 October 1990 with the stock funding of supply system operations. The remaining action areas I have outlined are currently being initiated and we are optimistic that significant savings will be achieved.

Inventory Management Improvement. This initiative institutionalizes our efforts to reduce inventory investment and the costs of supply support. The comprehensive inventory management improvement program we started in 1988 reflects our top management commitment to improve the efficiency and effectiveness of our supply system. Included within it are major efforts to reduce inventory requirements, shorten procurement lead times, improve world-wide inventory visibility, decrease long supply on hand and on order, and to capitalize on our ADP investment by providing improved decision support throughout the supply infrastructure. As a result of our efforts to date, in fiscal year 1990 we reduced the value of Navy inventory $2.8 billion (9 percent), disposed of over $2.8 billion of excess material, and reduced orders for new items by $1.3 billion (28 percent).

Consolidation of Supply Depots. This initiative will ultimately result in the transfer of all continental U.S. supply depot distribution operations (i.e. the functions of receiving, shipping, issuing, packing and storing) to the Defense Logistics Agency (DLA). The plan calls for savings to be achieved through reduced overhead, improved capacity utilization, implementation of standard automated systems, reduced transportation costs, and reduced capital investment costs. Navy implementation of this initiative began with the transfer of the Naval Supply Center Oakland, California supply distribution functions to DLA on 30 June 1990. Because of the complexity of integrating three service depot operations and the interruption caused by Operation Desert Storm, it is too early to adequately assess the results of this first consolidation effort. We are currently developing the schedule for consolidation of our remaining depots with DLA and the OSD staff. We are working closely with DLA to ensure the critical readiness support provided by these activities is not interrupted both during and following this functional transfer.

Consolidation of Depot Maintenance. This initiative is intended to consolidate service depot maintenance facilities as a means of reducing excess depot industrial capacity and lowering depot support costs. During the analysis process associated with the implementation of this initiative, it was determined that substantial opportunities exist to increase efficiency and reduce the cost of existing depot maintenance operations without risking the erosion of service mission peculiar engineering and logistic support. As a result, the initiative was redirected toward generating savings in six primary areas: streamlining depot operations through consolidation of indirect overhead functions, single siting rework and overhaul to eliminate redundant capabilities, consolidating component repair and other maintenance workloads, increased use of interservicing, increased competition of maintenance workload both among the services (public/public) and between the services and the private sector (public/private), and increased maintenance productivity through improved utilization of industrial capacity. Implementation of this initiative is being overseen by the Defense Depot Maintenance Council (DDMC), of which I am a member. Individual service depot business plans are being completed for presentation to the DDMC in June. We expect these plans to result in substantial savings to the Department beginning in fiscal year 1992.

Consolidation of Inventory Control Point Functions. This initiative results in the transfer of approximately 1 million consumable items from service to DLA management. In the Navy's case, 334,000 of our remaining 484,000 consumable items will be transferred. Those consumables items which will remain under Navy management include nuclear material, strategic support material, and design unstable items. The Navy has worked with DLA since the early 1980s in transferring consumable material appropriate for centralized wholesale management, and we continue to support this initiative. Although temporarily halted by Desert Storm operations, OSD recently authorized the services to proceed with planned fiscal year 1991 transfers. We are currently coordinating final arrangements for the transfer of our items with DLA.

Computer-Aided Acquisition Logistics Support (CALS). This initiative includes a number of individual actions focused on allowing us to take better advantage of today's improved technology in the transfer and storage of technical data via electronic means. CALS will support the technical information needs of the Department and develop a network system architecture for interoperability of existing/emerging stand alone technical information databases currently used in DOD. We are pursuing several CALS initiatives designed to improve the development, maintenance and dissemination of logistics and design data, as well as to reduce our current inventory in technical publications through increased use of print-on-demand technology. We are continuing our efforts to acquire the necessary hardware to implement the various CALS initiatives, and anticipate delivery of some of this equipment in fiscal year 1991. Savings from this DMR initiative are anticipated to commence in fiscal year 1992.

Standard Automatic Data Processing Systems. This initiative, also referred to as the corporate information management or "CIM" initiative, is intended to identify and implement management efficiencies through the use of standard automated information systems in meeting common functional requirements. Eight joint service functionally oriented groups have been established within DOD to identify standard functional requirements, set common data standards and oversee the implementation of the resulting new systems. The eight groups cover the following functional areas: civilian payroll, civilian personnel financial operations, contract payment, government furnished equipment, materials management, distribution centers, and medical. Action has already been taken by OSD to significantly slow the funding for development and modernization of existing information systems pending the results of the functional groups' efforts. The resulting funding adjustments have been incorporated into the fiscal year 1992/93 budget request. The majority of the savings potential attributable to this initiative will not materialize until new standard systems are developed and put in place in the future. We see this as an area of significant potential savings and are aggressively pursuing it.

SUMMARY

Mr. Chairman, I have covered a broad range of topics in today's testimony. There is a common thread between these diverse subjects. It is that we have attained substantial improvements in readiness and sustainability during the 1980s. Operation Desert Storm is the most recent validation of that accomplishment. We are, however, entering a changing world in the 1990s which has caused us to reevaluate how we structure and support our forces. We are aggressively pursuing initiatives—such as those encompassed under the Defense Management Review which will allow us to improve our support operations, reduce costs, and maintain the highest possible readiness and sustainability in support of our authorized force structure. Our fiscal year 1992/93 authorization request has been structured with that goal in mind.

Senator DIXON. Thank you, Admiral Straw. General Winglass, we would be glad to hear from you, sir.

STATEMENT OF LT. GEN. ROBERT J. WINGLASS, USMC, DEPUTY CHIEF OF STAFF FOR INSTALLATIONS AND LOGISTICS, HEADQUARTERS, U.S. MARINE CORPS

General WINGLASS. Thank you, Mr. Chairman. It is an honor to be here representing the Marine Corps, and particularly to be in company with my two distinguished colleagues, General McCausland and Admiral Straw, who are both good friends, I hasten to add.

At this point, sir, I would like to address your question on Marine Corps support to Desert Shield and Desert Storm, and I would like to begin by making two major points. These somewhat reflect on your opening remarks, as a matter of fact.

First of all, readiness. Pre-deployment equipment readiness of Marine forces—air, ground, and logistics—was at extraordinarily high levels, as I think you are well aware. I am happy to report to you that throughout the entire Desert Shield operation those high levels of equipment readiness for forces in Southwest Asia were sustained or maintained.

In good measure, and somewhat influencing this condition, this very positive condition, results from a policy of some long standing at Headquarters, Marine Corps, that the logistics component of the Marine Air Ground Task Forces would be staffed at a level that approximates that of the aviation and ground component of the MAGTF. In other words, that translates to having the right technical logistics expertise available to us in the Active component. I think the wisdom of such policy was demonstrated very, very well.

It is an important characteristic of the Marine Corps to have those supply, maintenance, engineer, explosive ordnance, postal, food service people in that active structure, and I think that decision of long standing now was certainly justified and demonstrated in terms of its effectiveness.

I would also like to make a point about sustainability. As you well know, sir, we have in the ammunition categories, in the spares categories, and in principal items, built our levels of sustainability to that of about 60 days in nearly all of the commodity areas. This availability paid handsome dividends for us in Desert Storm and Desert Shield.

Because we had the inventory organically controlled at the unit level, at the backup bases at Albany, Georgia, and out in Barstow, California, and we had the support of the infrastructure of the entire Department of Defense to sustain us over time, we believe that sustainment and readiness were two key ingredients to Marine Corps successes in-country. As you well know, this committee has been very, very instrumental in their support of those two endeavors.

Those two points made, subsequent replenishment for Marine forces occurred in -theater, and eventually General Schwarzkopf was able to place responsibilities for certain supply commodities with lead services, for the most part the U.S. Army. We concluded and derived support for medical supplies, some ammunition, food and rations, as well as fuel and then some other miscellaneous items from theater sources.

It is also important to keep in mind, and I think the point perhaps that was made by one of the members, we rely very heavily in the Marine Corps on our sister services—Air Force, Army, Navy and the DLA—as a source of supply. I think each and every one of them did very well in terms of being responsive to those replenishment requirements that developed over the time we had the forces deployed.

Within theater itself, you might be interested to know that we had a reinforced force service support group, the First Force Service Support Group, whose home base is in Camp Pendleton, California. This organization was reinforced and augmented with a substantial number of marines from the Second Force Service Support Group, and in point of fact, they delivered the whole potpourri of combat service support—engineer, medical, dental, and some of the other commodities that I have mentioned previously, postal, for example, which was very important.

They were in-country. We had two engineer support battalions that provided horizontal and vertical construction capability for our forces that were deployed. They worked in the area of water purification as we drew water from the Gulf and took it through reverse-osmosis purification techniques. They accomplished road-building, well-drilling, and so forth. They were reinforced by as many as five construction battalions from the Navy Seabees, who did a bang-up job in support of the overall effort for the Marine forces ashore.

So the point of what I am leading to is kind of an ecumenical effort, if you will, that took place over there in which all of the services supported one another, and it was just a delight to witness. I think it does demonstrate that jointness is taking hold.

Now, in addition to the FSSG that was ashore, we had ashore some aviation-peculiar logistics units—for example, the Marine Air Logistics Squadron, which provides supply and maintenance support to our aviation units. In fact, we used two of the T-AVB ships to get them there. We also had the Marine Wing Support Squadrons, which gave the air wing an organic engineer and transportation capability.

Then afloat we had two brigade support groups, with the two Marine Expeditionary Brigades that were awaiting mission and assignment from General Schwarzkopf under Admiral Arthur's command.

Back here our logistics bases at Albany and Barstow were very important to us because they provided a degree of replenishment. They did an awful lot of coordination with the DLA and with the Navy, Air Force, and Army. They satisfied pop-up maintenance requirements, as well as provided ongoing modification to equipment both here and also in theater, deploying some teams forward to do that sort of thing.

The logistics base at Albany coordinates activities at the Blount Island port in Florida, which you may be aware is where we conduct maintenance of our vital MPS equipment. Well, since the MPS was deployed and utilized in Desert Shield and Storm, that port was converted in part to throughput, and we pitched in and helped the MTMC, as Army units moved through the port of Jacksonville.

Again at the logistics bases we did pop-up work. We did some repair work for PRC-68 radios for the Air Force, for example. We did some fabrication work there for other services. We helped the Air Force with some medical issues. We worked with the Army and loaned them some equipment and they in turn loaned us some.

So it was really a universal logistics effort. Back here in the meanwhile, business as usual took place. We still had to be worried and concerned about care of our families. We had to be concerned about the troops who had not deployed to Southwest Asia but still had a continuing mission. We had to pay attention to what they were about, too, and see to their logistics needs. And then, by the way, we answered some mail.

Meanwhile, we dealt with planning for the ultimate retrograde and, as luck would have it, the retrograde effort began a little sooner than perhaps we had initially anticipated, and fortunately our key planning, a lot of it, had been done, so now we are in the execution phase of retrograde.

Finally, a comment on DMRs. Our efforts in these areas are responsive to the implementation guidance we receive as we embark on this new course. There is much to be done, I would hasten to add, and we intend to do the best we can to adjust to these new initiatives as we enter the shakedown phase of their implementation.

With that, sir, I think I am within my time constraints. I appreciate the opportunity to be here, sir, and await your questions.

[The prepared statement of General Winglass follows:]

PREPARED STATEMENT OF LT. GEN. R.J. WINGLASS, DEPUTY CHIEF OF STAFF, INSTALLATIONS AND LOGISTICS, U.S. MARINE CORPS

Mr. Chairman and members of the committee, thank you for the opportunity to appear before you to discuss the logistics support provided to marines involved in Operations Desert Shield/Desert Storm, Marine Corps maintenance and support requirements anticipated in the coming months, and impact of the fiscal year 1992 and fiscal year 1993 Defense Authorization request on the capability of the Marine Corps to meet wartime logistical support requirements and some of our actions to implement Defense management initiatives.

First please let me express the Marine Corps' appreciation to the members of this committee for supporting our efforts in recent years to modernize our Corps and enhance our readiness and sustainability. Without the logistics depth your support made possible, acquired through years of persistent programming and budgeting efforts, our rapid build up of needed combined arms power in Southwest Asia may not have been possible. Your actions have allowed us to achieve high equipment readiness; a key to the Corps' performance in Southwest Asia and the concurrent evacuation operations in Liberia and Somalia. Your continued guidance and assistance will ensure that we remain postured to respond to future contingencies around the globe.

Perhaps the most noteworthy logistics achievement during Operation Desert Shield was the rapid deployment to Southwest Asia of a credible, task organized combat force with requisite organic sustainment on hand. A fundamental characteristic of naval forces is deployment with adequate levels of sustainability; this was clearly demonstrated during Desert Shield/Storm.

The Marine Corps pre-Desert Shield readiness rate (for combat essential equipment) was above 90 percent. On the day the ground campaign commenced, the readiness rate of our deployed forces continued above 90 percent. During the post-conflict period we expect minimal degradation in readiness within our Marine Air Ground Task Forces (MAGTFs). We will focus upon maintenance during the next several months as units are returned to home stations.

Turning to specific Desert Shield/Storm logistics issues, the following background is provided.

Marine aviation units deployed with Fly In Support Packages (FISPs) containing 10-30 days of supply required for organizational level aircraft maintenance. Within 34 days, the two aviation logistics ships, T-AVBs, arrived with 90 days of organizational and intermediate level spares, plus all required equipment to establish 2 Rotary Wing and 2 Fixed Wing Intermediate Maintenance facilities and organic computer systems allowing indefinite replenishment from our supporting Navy supply system. In a word, the system proved "responsive" as aircraft availability remained high throughout the months away from home bases.

As you are aware, the Maritime Prepositioning Force (MPF) program has been one of the premier success stories of Desert Storm. Implemented 10 years ago to compliment our amphibious capability, the strategic flexibility offered by MPF combined the advantage of airlift speed with sealift capacity and forward positioning to rapidly deploy Marine Expeditionary Forces (MEF) in support of the warfighting CINC. The MPF provided the CINC with his first, and for a couple of weeks, his only formidable mechanized force. The operational deployment was a convincing demonstration of the flexibility, responsiveness, and value of the Navy/Marine Corps MPF. The first ships arrived in Southwest Asia within a week of receiving their movement orders. As they began off-loading their cargo, Marine units from California and Hawaii, flown in by strategic airlift, were there to link up with their supplies and equipment. All three of our MPF squadrons were eventually employed in the Persian Gulf. Each of the three specially configured squadrons provided sufficient tanks, artillery, vehicles, ammunition, supplies, food, fuel, and water to support a brigade of 16,000 marines and sailors for 30 days of combat. Had these three brigades of equipment and supplies been transported by air about 9,000 C-141 sorties would have been required. When the decision was made to land a 45,000 strong MEF in Saudi Arabia, MPF ships were immediately put on alert as Operation Desert Shield began. Within 12 days the first Diego Garcia-based ship began unloading in Saudi Arabia. Thus, the MPF provided the marines with immediate sea-based sustainability or staying power. The utility of the ships did not end with the off-load of their cargo. Two of the ships subsequently formed the nucleus of a floating, mobile, logistics seabase. A third ship was reloaded with supplies and equipment available in the Pacific theater and is now at sea as a CINCPAC resource.

Two brigades of marines deployed to Southwest Asia aboard amphibious ships carrying with them equipment and supplies necessary to support and sustain 30 days of combat operations. Follow on sustaining supplies for the brigades were promptly moved forward on commercial vessels. Meanwhile other logistics actions were in process.

Operational logistics team work has been evident throughout. Marine combat engineers augmented by 2,600 Naval Mobile Construction Battalion sailors made enormous contributions by breaching mine field lanes, building fuel farms and wager points, constructing supply routes and ammunition storage points and building a variety of essential troop habitability and survivability positions. Additionally, soldiers from Army transportation and petroleum units assisted by providing heavy equipment transport and fuel distribution throughout the Marine Corps area of operations.

In-theater supportability was achieved with the establishment of an intermediate-level inventory control point in Saudi Arabia. This inventory control point, referred to as the SASSY Management Unit (SMU), consolidated all ground requirements for Marine units both ashore and afloat and was the Marines' first source of supply. It was the focal point for receipt of incoming supplies and subsequent distribution to supporting combat service support elements in direct support of forward deployed units and front line troops. Additionally, through direct interface with designated Department of Defense integrated materiel managers, many in the Defense Logistics Agency, the SMU consolidated and expedited outstanding requisitions for critical supply requirements.

The ability of the SMU was significantly enhanced with the establishment of the Deployable Force Automated Services Center (DFASC) in theater. This center provided the SMU and all Marine forces in theater with computing capabilities to facilitate materiel accountability and requisitioning. It also gave the SMU the capability to transmit requisitions directly to and communicate with sources of supply throughout the world.

On the aviation side, the intermediate maintenance and supply capability was established by each deployed Marine Aviation Logistics Squadron (MALS) which provided real time communication capability with stateside inventory control points for critical materiel. Organic automated data processing, financial, and inventory control systems to include replenishment capability direct to stateside points of entry were also provided.

The Marine Corps Logistics Bases and their integral Depot Maintenance Activities, located at Albany, Georgia and Barstow, California surged to a 7 day per week operation, initially withdrawing from stock and shipping forward spare parts, consumables, and principal end items. The logistics bases continued their vital maintenance role by accelerating the workload to accommodate increased requirements. These multi-commodity facilities provided the Corps its first source of critical war materiel. Because of the responsiveness achieved by collocation of maintenance and supply functions, the logistics bases once again demonstrated their importance to the overall service logistics mission.

Marines augmented, with people and equipment, existing naval aviation maintenance facilities in Spain and Italy which provided jet engine repair capability for selective aircraft engines. (CH-46E/CH-53E/F/A-18A/C/KC-130). Responsive depot level support continued throughout the conflict at the several Naval Aviation Depots.

Our ability to deploy and sustain the massive forces necessary to ensure victory in Southwest Asia was no accident. It was in good measure the result of the high state of individual readiness of marines who comprise our active force logistics element. The staffing of our logistics units played a major role as it has long been our policy to retain the highly skilled logistics personnel in our Active forces in numerical balance with their ground and air combat associates. This policy resulted in having immediately available the supply, transport, engineer, embarkation, postal, and food service personnel we required for Desert Shield. These active duty marines were augmented by the highly skilled logisticians of our Reserve component once their activation was authorized.

We have now turned our attention towards the return of our units and their equipment and the stocks drawn from the logistics bases. Reloading of the MPS is an important element of our current efforts. MPF and prepositioned war reserve supplies which were consumed during the course of Desert Shield/Storm must be replaced. The costs of these efforts include the replacement of supplies consumed, the labor and operating expenses associated with repackaging the supplies, reloading the ships, and restocking the warehouses. For nonconsumables, corrective maintenance efforts will be required to restore equipment items which have experienced the rigors of combat in the harsh desert environment.

Our entire logistics community, involved with both aviation and ground equipment, will play an important part in this reconstitution effort. Marine logisticians, both military and civilian, will be put to a challenging test.

The fiscal years 1992 and 1993 budget request addresses the challenge of force reductions and simultaneously provides the minimum essential funding for a ready, expeditionary, selfsustaining versatile Marine Corps. In the budget years, defense dollars support a smaller Marine Corps—ready and responsive to future needs of the Nation. Resources in our present request strike a balance among all competing requirements and, with judicious application, allow us to achieve the vital capabilities that are required.

The Operations and Maintenance, Marine Corps budget, which supports our logistics functions to maintain readiness and sustainability for fiscal years 1992 and 1993, are $1,895 million and $1,739 million, respectively. The downward trend of recent years has accelerated and after netting out functional transfers and the effect of increased burdensharing, there is a decrease of 8.6 percent from our fiscal year 1991 approved funding level.

Funding for post conflict requirements related directly to Operation Desert Shield/Storm for fiscal year 1992 is only partially reflected in our budget submission. We look to the Defense Cooperation Account as a financing source for requirements which cannot be satisfied in fiscal year 1991 or with the $75 million earmarked for the MPS which I later describe.

We are confident the fiscal years 1992/1993 budget submission preserves essential capabilities of the authorized force structure, both Active and Reserve, to respond to future taskings. Care has been taken to maintain essential balance among ground combat, aviation combat, combat service support components, and the supporting establishment (bases/stations). This balance of forces is key to the integrated and self-sustaining abilities of our Marine Air-Ground Task Forces.

We are making significant decreases to manning across the program. Civilian personnel end-strength reductions of 12 percent between fiscal years 1991 and 1997 will be absorbed by sharing the burden across the infrastructure. As a result, the impact of such significant labor reductions on individual missions (i.e., supply, logistics, and base operations) cannot be precisely measured at this time.

The fiscal year 1992 request includes a one-time increase of $75 million for continuing post conflict efforts associated with reconstitution of the maritime prepositioned ships. Other follow-on funding for fiscal year 1992 was not addressed during budget preparation due to the uncertainty of requirements.

The gross operation and maintenance, Marine Corps supplemental request in support of Operation Desert Shield/Storm totaled $1,759 million before consideration of assistance-in-kind, $1,503 million after considering the assistance. Final congressional action provides $1,205 million, after considering assistance-in-kind, of which $1,156 million is planned for logistical support.

Our military construction request is for $87 million in fiscal year 1992. Our fiscal year 1993 request is uniquely comprised of $32 million for military construction and $109 million for major repair and minor construction of real property. This will provide for the facilities needed to support the Marine Corps' highest priority programs for improving readiness and sustaining our forces. The fiscal year 1992 request is smaller than each of the two prior year submissions; the reduction, however, should not be interpreted as reflecting a declining need for facilities. Rather, it reflects the result of difficult budget decisions; decisions that reflect a keen competition for scarce resources that has required us to postpone some of our highest priority construction requirements. Our request is reflective of our continuing effort to support Marine Corps mission requirements, with emphasis placed on providing facilities that promote personnel and materiel readiness, enable compliance with environmental regulations, enhance productivity, improve morale and welfare, and provide quality-of-life items necessary to attract dedicated men and women to our Corps, and retain them. Your past support reflects a deep appreciation for the relationship between facilities and warfighting capability. Modern, high quality facilities have contributed significantly to improved mission capability, productivity, readiness, and sustainability. We remain committed to providing a balanced program that includes facility improvements in all areas, such as operations and training, maintenance, supply and storage, administration, quality-of-life, and utilities.

In the midst of an exceptionally busy operational period we are preparing to reduce our end strength. I must emphasize that these reductions will have a disproportionate impact on our operating forces: the Fleet Marine Forces, Marine Security Forces, Marine Support Battalion (Naval Security Group), and the Marine Security Guard Battalion.

In the process of achieving a force with balanced ground, aviation, and service support forces we insisted that organic sustainability be maintained in spite of strong pressures to try and gain "tooth" at the expense of "tail." As a result, our combat service support is in our active force structure and we will continue to maintain a "tooth" to "tail" ratio consistent with a truly expeditionary force.

Decisions in the post-conflict era, when resources are scarce, will be difficult. However, we must reconstitute our sustainability and our MPF capability to meet the next crisis as quickly as possible.

This budget takes due account of recent Department of Defense management actions designed to realize efficiencies and economies in selected support activities.

The Marine Corps has given its full support to the Defense Management Report logistics management initiatives. It is our opinion that the savings identified are a challenge.

Specifically, the supply depot consolidation under the Defense Logistics Agency will impact upon three Marine Corps activities (Marine Corps Logistics Bases Albany, Georgia and Barstow, California and Marine Corps Air Station, Cherry Point, North Carolina). In as much as these depots have very limited involvement with the wholesale consumable item business this initiative is not expected to have dramatic impact. We will be working with DLA officials in the months ahead to clarify and codify our respective roles.

We fully support the Depot Maintenance consolidation and competition initiatives and have played a very active role in the development of their implementation strategies. We have published a Marine Corps Corporate Business Plan to achieve long-term efficiencies as directed by these logistics management initiatives. We project a savings of $14.7 million in depot maintenance operating costs during fiscal years 1991-1995. We are looking forward to competing for best value and remain committed to awarding our first contract during this fiscal year.

In summary, I am very proud of the logistics performance during Operation Desert Shield/Storm. The marines and sailors of the I MEF, supported here in the United States by our organic logistics bases, our sister services, and the DLA revealed a high return on the defense investment. Reconstituting our warfighting capabilities expeditiously and at the lowest possible cost is our current challenge. High readiness and restored sustainability levels are our near term goals so as to maintain the competitive edge that we enjoyed in the Persian Gulf. Your marines, regular and reserve, reinforced by the sailors who serve with us and a small but expert civil service work force are at their posts around the globe, committed to tasks at hand. Each of you on this committee have helped us and we thank you.

Senator DIXON. Thank you, General. General McCausland.

STATEMENT OF LT. GEN. CHARLES McCAUSLAND, U.S. AIR FORCE, DIRECTOR, DEFENSE LOGISTICS AGENCY

General McCAUSLAND. Thank you, sir. Mr. Chairman and members of the subcommittee, I appreciate the opportunity to once again appear before you and describe DLA's contributions to the readiness, sustainability and support of the military services.

In doing so, I will address some of the initiatives the Agency has in process or will undertake to improve our efficiency and our effectiveness. First, let me update you on our Agency's accomplishments in fiscal year 1990, our efforts in support of Desert Shield and Desert Storm, and then discuss some of our budget submission and address challenges set before us in 1992 to 1993.

The magnitude of our support is reflected by our accomplishments of last year. Our supply centers received 28.9 million requisitions and handled over 1.3 million contractual actions. Our depots received and shipped 20.9 million line items, and in contract administration we made payments of $57 billion to contractors, while processing nearly 1.5 million invoices.

I am thankful for your continued support, Mr. Chairman, and the support of other members of this subcommittee. The resources you have authorized have given us the capability to play a vital role in the Department's logistics system.

Let me take a moment to outline the challenges and our efforts in support of Operation Desert Shield and Desert Storm and then proceed to the budget year. I take great pride in the accomplishments of my fellow servicemen and women and those of our allies who performed so magnificently in the Persian Gulf. Without a doubt, DLA employees also contributed enormously to the success of the operations.

From the outset of Desert Shield through the successful completion of Desert Storm, DLA employees aided in the largest and most rapid logistical buildup since World War II.

Let me take a moment to detail our efforts. In the past 8 months we received more than 1.9 million requisitions, issued more than 500,000 tons of spare parts and materials that included more than a million sets of desert uniforms, over 220 million meals, the medical supplies that range from field-level medical components to MASH hospitals, and all petroleum requirements.

We did not circumvent logistics systems to do these things; we used those systems. We implemented regulatory and legislative provisions, extended work shifts, and hired temporary employees to get the job done. Our systems worked and the dedication of our employees who manned those systems was, without question, the key to their success.

The swiftness with which our forces defeated the enemy surpassed the logisticians' ability to adjust their support levels. We are now in the process of adjusting to the logistics phase-down, and we are doing so as the military services revise their requirements.

It is still too early to tell precisely what demobilization actions will be taken, but ultimately some contracts will be terminated; we will discharge temporary employees; and we will evaluate our performance on a lessons-learned basis.

These are not painless actions. For instance, we asked our suppliers to accelerate or expand their operations and give us their highest priority. They responded to our needs and did so superbly. But the realities of peacetime requirements and national security priorities dictate that we adjust our support to the future needs of the services.

Mr. Chairman, with respect to current and future operations, the Department, as you know, is moving into a new era of management, one that focuses on maintaining mission performance while reducing overhead and administrative costs. Let me take a moment to summarize a few of those actions.

Last year, DLA was assigned the mission as the Department's contract manager and in turn the services transferred 44 plant offices, 5,400 people, and 100,000 contracts to DLA. As a result of streamlining this mission, we identified $62,000,000 and 2,200 workyears saved in our 1992 budget request.

In addition, we are fast becoming the Department's wholesale depot manager. The initial consolidations took place last year between our depot in Tracy, California, the Sharpe Army Depot in Stockton, and the Navy's Oakland depot to initiate a west coast distribution system.

This spring we are scheduled to consolidate, starting next week, DLA's depot in Mechanicsburg with the Army's New Cumberland depot to initiate an east coast management system. The remaining depots will be consolidated through fiscal year 1993. We expect annual savings of approximately $175 million upon full implementation of this initiative.

Also, the Department is finalizing the reassignment of consumable items to DLA. We already manage 3 million consumable items, and we expect another million items to be assigned to our supply centers through fiscal year 1995. Centralization of this management will provide further savings.

Lastly, the Department has established the Defense Accounting and Finance Service. We have transferred our finance center in Columbus, Ohio, to this organization and expect that our total accounting and finance work force and responsibilities will be transferred by year's end.

Mr. Chairman, as you know, fiscal year 1991 introduced a new method of financing supply operations. In the absence of a direct DLA O&M maintenance appropriation, our customers now pay for our services through a surcharge in our stock fund. Consequently, the OSD Comptroller transferred resources for this surcharge to our customers.

The move behind this change is the recognition that customer demand for our services is the primary cause of operating costs, and in turn management of those operating costs can best be evaluated as a reaction to that demand.

The movement to a cost-reimbursable operation is further supported in this year's budget request. The Department has established a new revolving fund, the Defense Business Operating Fund, or DBOF. The DBOF effectively moved DLA appropriations to those DOD components that require our logistics services or, in the case of contract management, funds were transferred to the appropriation portion of DBOF for fiscal year 1993.

As you can see, Mr. Chairman, the level of support we will provide will be determined by the dollars appropriated to the military departments, our primary customer. As they downsize their logistics operations and their operations generally, you will see a decrease in the need for logistics support and the associated costs.

With that in mind, Mr. Chairman, let me move on to our budget request and specific program objectives. Our submission is based on the following three considerations—that we provide effective support to the military services; we must be prepared to meet our responsibilities in the event of mobilization; and that we must meet these responsibilities at the lowest possible cost.

With that objective in mind, the budget of $1.2 billion presented to you corresponds to the workload in the contract management area and to operating the Defense Industrial Plant Equipment Center. As stated earlier, we have recognized substantial savings in contract management in 1992. These savings are attributed to the DOD hiring freeze and consolidation and streamlining initiatives.

The O&M request assumes level workload in contract management; however, we find a 1 percent increase in workload is equal to about $7.5 million.

Mr. Chairman, we have historically emphasized technological advances and facility upgrades in our efforts to increase efficiency and effectiveness. As you know, these investments have been funded out of the Procurement and Milcon accounts. We now identify those same efforts in the DBOF.

Fully funding these investments is mandatory to ensure we capture the productivity opportunities and enhance our overall effectiveness capability. In doing so, we are increasing our efficiency by replacing inefficient and uneconomic equipment, providing for environmentally safe storage of our hazard materials and waste, and looking to ensure the safety and health of our employees and the surrounding communities.

As you know, the Department has declared a pause in fiscal year 1993 for new construction—a prudent approach given the uncertainties of the Base Closure Commission and the force management restructuring that has yet to be finalized.

In light of those uncertainties, our fiscal year 1992 facility replacement strategy was approached very cautiously. An operations center at Columbus, Ohio, is our most critical facility project. Current operations are located in buildings that have been extended beyond manageable cost-effective use, and we are requesting $89 million to correct that situation.

In summary, the investment accounts determine how well DLA performs its mission and at what cost. The ability to move massive amounts of supplies half way around the world does not start with a cargo vessel but with a requisition. The technologies DLA depends on are not smart bombs or missiles but smart logistics systems.

Equipment and facilities that receive requisitions buy, store, and ship military materiel or administer our weapons systems contracts are vital to our success and the cost of that success. I am convinced that these investments will pay off in the long term, and I ask that the subcommittee recognize these efforts as they pertain to the readiness and support of the Armed Forces.

Given the uncertainties of the threat to our Nation's security, as demonstrated by the situation that developed in the Persian Gulf, I am as comfortable as possible with our budget as submitted. Mr. Chairman, I would like to say that I appreciate being here and will welcome your questions.

[The prepared statement of General McCausland follows:]

PREPARED STATEMENT BY LT. GEN. CHARLES MCCAUSLAND, U.S. AIR FORCE, DIRECTOR, DEFENSE LOGISTICS AGENCY

Mr. Chairman and members of the subcommittee: I am Lt. Gen. Charles McCausland, Director of the Defense Logistics Agency (DLA). I appreciate this opportunity to appear before this subcommittee and testify to DLA's contributions to the readiness, sustainability, and support of the military services. I will also address our program capabilities and some of the initiatives that are in progress or will be undertaken in support of the President's fiscal year 1992/93 authorization request.

I would like to take a moment to remind you of DLA's responsibilities as a Combat Support Agency; our role in the overall DOD logistics effort; and describe the challenges presented by Operations Desert Shield and Storm.

DLA exists to support the Commanders in Chief (CINCs) and the Unified and Specified Commands. We accomplish this support through two primary missions. First, we provide the fuel, clothing, medical, and subsistence items used by the Armed Forces, as well as many of the hardware items, repair parts and other consumable items required by their weapon systems. In total, we manage more than two-thirds of the consumable items in DOD and fill about three-quarters of the total requisitions.

In our other primary mission, we administer contracts for the Department of Defense (DOD), for other Federal agencies, such as the National Aeronautics and Space Administration (NASA), and foreign governments. In doing so, we conduct our business with approximately 30,000 contractors, which involves assuring that the contractors' perform in accordance with contractual commitments and assuring contractual quality requirements are met.

In addition, we operate the Federal Catalog System; are responsible for management of the reutilization and marketing of excess Department of Defense property; and procure and manage the Nation's stockpile of strategic and critical materiels to ensure that materiels such as rubber, tantalum, and platinum are available during a national emergency.

The missions that I have described demonstrate that we are involved throughout the life cycle of major systems, from providing technical information during the engineering and development process, to disposal of items when a system is phased out. The magnitude of our support is reflected in the following fiscal year 1990 data: received 28.9 million service requisitions; provided $11.1 billion worth of supplies; conducted nearly 1.3 million contract actions by our Supply Centers; and received and shipped 20.9 million line items at our Supply Depots. Last year we were designated as DOD's contract manager. As such, we were delegated more than 100,000 additional contracts with a value of $400 million. Today, the total number of contracts we manage approaches 500,000 with a value of almost $750 million.

In summary, DLA issues supplies, which we have bought, manages the contracts to ensure we receive quality products, and disposes of property after it has served its useful purpose. These are the actions of a work force that delivers critical quality services and products to the men and women in uniform. These are, for the most part, behind-the-scene efforts but, as demonstrated during Operations Desert Shield and Storm, absolutely necessary.

Now let me take a moment to address our participation in Operations Desert Shield and Desert Storm. From the outset of Desert Shield in August through the successful completion of Desert Storm in February, we received 1.9 million requisitions in support of the operating forces. We issued more than 220 million meals, over 1 million sets of desert uniforms, 370,000 sets of chemical suits, 225,000 pairs desert boots, and medical supplies that included Deployable Medical Systems (four combat support, three evacuation, and six MASH hospitals). We implemented regulatory and legislative authority available to us to accelerate procurement and delivery of these critical materiels to the theater. We extended or added work shifts at our depots and hired additional temporary personnel where needed. The DLA Clothing Factory located in Philadelphia, Pennsylvania shifted its production lines within a week and by the end of the crisis had produced more than 175,000 coats, 145,000 pairs of trousers, and 63,000 flight coveralls, in support of the requirements for desert camouflage battle dress uniforms. We established a Defense Reutilization and Marketing Office in Saudi Arabia to manage the usable and unusable personal property remaining from Desert Storm.

Within hours of the Iraqi invasion of Kuwait, DLA moved from a peacetime environment to a full national emergency support posture. We immediately activated our Logistics Readiness Center and Emergency Supply Operations Center to maintain round-the-clock command and control over the actions and reactions of our logistical work force. Liaison officers were dispatched to coordinate with front line elements in the Persian Gulf. As the magnitude and the complexities of the operation unfolded, DLA became a major logistics partner in identifying requirements, priorities, and special actions on materiels and issues ranging from subsistence and chemical suits to Foreign Military Sales and the industrial base.

Wartime logistics systems are, at best, difficult to assess in a peacetime environment. The real test of these systems occurs as the result of the accelerated demand placed upon it in a crisis. Desert Shield and Desert Storm represented such crises. Yet, the feedback that I received from the Armed Forces in the Persian Gulf and the Joint Chiefs of Staff was positive. Our logistics systems worked. We supplied one of the largest and most rapid military buildups in modern history. A key element, and one that should not be overlooked, was the effort given by our employees. Their involvement is without question that of the highest professional level. They each hold ownership for the success of the military campaign.

Our support to the military presence in the Southwest Asia theater is based on the demand for logistics support. That demand will be the factor that determines the level of support we will supply in the coming months. For example, we hired over 1,700 temporary employees in our depots to supply the troops involved in Desert Shield. The managers of those depots have been advised to decrease those employment levels as the demand for our support subsides.

Let me briefly express my appreciation to the American public for its consideration for the safety and comfort of our front line troops. I am referring to the more than $40 million worth of donations we received from individuals and public concerns through DLA as the DOD Executive Agency for such donations. It is an example of how the interest to support our men and women in uniform exceeded the boundaries of the Defense community. In response to that interest, we established a DOD Donations Hotline which received over 10,000 inquiries.

As we move from the success of Desert Shield, we are evaluating issues that arose as a result of that conflict. One of our needs is to create an annual investment to maintain a warm industrial base for "War Stopper" items. War Stopper items are defined as: consumable items that are combat critical, military unique, have low peacetime/high wartime demand, require long production leadtimes, and may have a limited shelf-life. Some of these items include: Meals-Ready-To-Eat (MREs), chemical protective suits, gloves and footwear, and nerve agent antidotes. Traditionally, some of these War Stoppers have been budgeted and funded by the military departments as service war reserves. We are considering some different approaches for War Stopper items so we can react more quickly in wartime or for other contingencies to the immediate needs of our CINCs. The objective is to acquire equipment, capacity or assets to minimize industrial surge leadtimes for these essential items. We are working with OSD(P&L), JCS, as well as the military services, to develop the concept.

Now I would like to turn to our authorization request and specific program objectives. The focus of this year's budget submission remains unchanged and is based on the following considerations:

1. That we must provide effective and quality peacetime support to our customers—the military services.
2. That we must be prepared to meet our responsibilities to provide that support in the event of mobilization.
3. That we must meet our responsibilities at the lowest possible cost, which means that we must find ways to increase productivity.

The fiscal year 1992 O&M budget presented to you requests an authorization of approximately $1.2 billion. This provides funding for only Contract Management and its support costs; and the Defense Industrial Plant Equipment Center (DIPEC) and its support costs. While the DLA O&M request is based on workload projections, there is always the uncertainty about the actual workload demand. For us, in the contract management area, each 1 percent increase in workload costs about $7.5 million.

The remaining programs, including Supply Operations and Reutilization and Marketing Services, will be financed by the Defense Business Operations Fund (DBOF), reimbursable orders from non-DOD customers. The Office of the Secretary of Defense delayed the financing of Contract Management and DIPEC in the DBOF until fiscal year 1993.

The DBOF method of financing recognizes the need to establish business-type financial management systems to gain the benefits and efficiencies associated with the application of business management principles, to provide full cost visibility, and to implement productivity.

The capital investment portion of the DBOF emphasizes investments in operating equipment, automated data processing equipment and facilities construction. This is a continuation of our efforts to increase productivity in our operations by modernizing through the available technology or replacing uneconomic equipment and facilities.

We have included plant modernization capital investment equipment totaling $184 million in the fiscal year 1992 DBOF and $46 million in fiscal year 1993. These investments were previously financed through the Procurement, Defense Agencies appropriation.

We are determined to continue to reduce the cost of doing business, and we are doing so with emphasis toward the timely and cost efficient delivery of quality goods and services. This is demonstrated by way we prepare our equipment requirements: replacement and modernization. Replacement items are defined as those which have outlived their economic or productive value such as, forklifts, vehicles, cranes, and front-end loaders. Replacement items are only 20 percent of the $184 million program in fiscal year 1992 and 45 percent of the fiscal year 1993 program. Conversely, modernization utilizes the advancements in technology, such as mechanized systems and automated data processing, to produce increases to productivity and effectiveness by reducing the need for manual intervention.

Modernization through our investments in Automated Data Processing (ADP) equipment, $61 million in our request for fiscal year 1992, continue to increase both the efficiency and the effectiveness of DLA's work force. The businesses that we manage require massive amounts of data to be transmitted between ourselves and our customers. This movement of data ultimately translates to the movement of supplies and services to our military customer's. DLA has made great strides in taking advantage of this technology, but there is much that remains to be accomplished. For example, our Cataloging Tools On-Line (CTOL) effort will be used by our Supply Centers to take us from a cataloging format that forces continued manual intervention to a format that allows direct access to information for locating and defining supply requirements. Impractical manual processes are no longer acceptable business practice, if we are to meet the cost and service demands of the Armed Forces.

Our wholesale distribution business remains labor intensive, but continued investments in existing technology presents an opportunity for modernization to reduce operating costs. Planned acquisitions for fiscal year 1992/93 include: software systems to automate operations, narrow aisle equipment to increase cube utilization, and state-of-the-art mechanized material handling systems that replace uneconomic and inefficient systems. Historically, mechanized material handling systems go through large annual funding swings. For example, in fiscal year 1990, we were authorized $11.8 million, and in fiscal year 1991 we were authorized $29.3 million. Our fiscal year 1992 and fiscal year 1993 investment request for these systems, through the DBOF, are $57.9 million and $6.4 million, respectively. The annual swings reflect grouping of mechanization projects and the impact of the depot consolidation effort mentioned later in the statement.

Short run cost increases created by the investments I described may raise some concerns, but the alternative is to accept the consequences of greater future operating costs or decreased support, and I hope you agree that these alternatives are unacceptable.

DLA's other investment program is facility construction—projects previously requested for authorization in the Military Construction (MILCON) appropriation. These projects are justified based on requirements to replace inefficient or uneconomic facilities; protect the environment; ensure safety and health; or to support an increased mission. As you know, the Department has declared a "Pause" to facility construction in fiscal year 1993, and accordingly, our submission reflects that decision.

Our supply mission is, for the most part, performed in warehouses used for storage and, in many cases, converted warehouses serve as office space for our work force. Most of these buildings have been in existence for 50–70 years and they have far exceeded their cost-effective use. We are requesting 89 million for an urgently needed Operations Center at the Defense Construction Supply Center in Columbus, Ohio. It will house some of our work force currently located in leased space; eliminate high maintenance costs on obsolete utility systems and structures; and provide an environment that can handle modern office equipment without the power outages and brownouts that now occur.

Environmentally sound storage for hazardous materials and wastes and DLA's commitment to replace environmentally unsafe bulk petroleum storage facilities continue as high priorities. Our request includes $42.8 million in support of these efforts. A total of $6.2 million is required to satisfy safety and health issues.

Last, the Navy requires additional bulk fuel storage capacity at the Defense Fuel Support Point, Diego Garcia. The existing peacetime operating stocks satisfy only 32 percent of the total requirement, while only 10 percent of the Pre-Positioned War Reserve requirement can be satisfied. Additional tankage will fully satisfy those requirements.

In summary, the DBOF capital investments, previously requested in the PDA and MILCON accounts, dictate future performance. These are not, in most cases, quick pay back programs, but I am convinced that they are prudent for the long term and ask that the subcommittee recognize these efforts as they relate to the operating costs submitted in the DLA budget request.

In addition to modernized equipment and facilities, we will continue to provide our employees with an environment that will foster increased efficiency. We will focus on the customer's needs through improvements to our processes and methods of doing business. These efforts will be driven by employee involvement and enhanced by data based decisions. DLA managers recognize that our employees are our greatest resource in developing and implementing new and better methods for doing their jobs, and we are exporting their ideas from one activity to another. Our employees are also working closely with manufacturers to "build quality" into the goods and services we purchase for our customers. I am confident that the course of action that I have described will provide the levels of productivity improvements necessary to meet future resource reductions, while ensuring quality services and products for our Armed Forces.

Several Departmental fiscal year 1991 initiatives will ultimately make the logistics system much more efficient and effective. We know them as Defense Management Report Decisions or DMRDs, for short. I will discuss five of those that have the greatest impact on DLA:

First is the transfer of our O&M supply system costs to those of our primary customers, the military services. We now charge those customers through a Stock Fund surcharge for the services we provide. This financing method provides greater visibility to the actual cost of operations. It also affords us the opportunity to make trade-offs between materiel (Stock Fund) and support (O&M) costs, where net savings is the determining factor, as opposed to the former appropriation barriers. For example, a manager may intensify value engineering costs (operating) to promote vendor competition, thereby decreasing materiel costs (procurements from those vendors). Approval of the DBOF financing concept in fiscal year 1992 will allow us to utilize and expand these same principles.

Second, is the consolidation of the military services' Depot Distribution Centers to DLA for management. The Secretary of Defense has decided to assign wholesale distribution responsibilities to DLA and in fiscal year 1990 we assumed operating control of Sharpe Army Depot in Stockton, California. The Army Depot in New Cumberland, Pennsylvania, the Army Depot and Air Force distribution activities in Sacramento, California will follow suit later this month. The Air Force distribution activity in Ogden, Utah will transfer in October of this year. In addition to the management of distribution functions at Sharpe and New Cumberland, we will also assume management responsibility for the family housing units located on those installations. This represents an increase of 170 units and about $650 thousand to our Family Housing O&M request for both fiscal year 1992 and fiscal year 1993.

Transfer of the remaining distribution functions will take place during fiscal year 1992/93. Our proposed schedule for these transfers will be forwarded to the Under Secretary for Acquisition in early May. We also plan to organize our distribution functions into regional configurations for management purposes, which will ultimately provide savings attributed to overhead, eliminate duplicative functions, achieve economies of scale, and optimize all distribution facilities.

In conjunction with the management of the DOD Distribution Centers, the Department is in the process of transferring 1 million additional consumable items to DLA for management. This transfer will be phased in during the next 4 years and will increase the number of items we manage by roughly 33 percent.

The fourth DMRD concerned the streamlining of contract management, which in June 1990 consolidated the military services' contract management responsibilities into DLA. We have performed the Contract Management mission for almost 25 years and our record for providing excellent service is supported by the Secretary's confidence in expanding our mission to include nearly all DOD contract management responsibilities. This essentially gives the Department a single face to industry in contract management. It also achieves economies of scale by reducing overhead and administrative support costs. We have established the Defense Contract Management Command, under DLA, to handle the expanded mission and to ensure the success of this consolidation.

The fifth is the recent consolidation of finance and accounting support by the establishment of the Defense Finance and Accounting Service (DFAS). Prior to the establishment of DFAS, DLA paid DOD contractors, employees' payroll, and provided for its accounting and finance systems support. This mission is planned to be fully transferred by the end of this year.

I am satisfied that our budget, as presented, represents the resources required by the Agency to support our Armed Forces during the budget years and provides a solid foundation from which to surge in the event of an emergency situation, such as the one we just experienced.

The civilian and military personnel of DLA have an outstanding record in support of the Armed Forces. One in which they can take great pride. We look forward to the challenges that lie ahead, knowing that more is yet to be done, and attacking those challenges as dedicated employees. My commitment to them as the Director is to provide the support and resources to do it.

Senator DIXON. Thank you, General McCausland.

Gentlemen, we are going to proceed with some questioning here and after I have directed some very brief questions to you I am going to yield to my distinguished colleague, the ranking member.

I think all of you know that I have had a long interest here in the Senate and on this committee in our defense industrial base, and several weeks ago was the manager for the Defense Production Act in the Senate.

There was an article in the March 25 edition of the Washington Post. I wonder if you gentlemen saw it. It was headlined: "U.S. Relied on Foreign-Made Parts for Weapons." The article noted: "With the globalization of high technology industries, U.S. troops in combat in the Persian Gulf found themselves dependent for the first time on foreign countries for the tiny semiconductor chips, transistors, and other electronic parts essential to their advanced weapons."

Then the article went on to state: "While the issue of the Pentagon's dependence on foreign suppliers was debated before the Gulf war, it came into sharp focus during the conflict, when the administration had to seek help from foreign governments in several cases to get parts needed for American manufacturers."

Now this is what struck me in particular. "On nearly 30 occasions the administration needed help from foreign governments to get delivery of crucial parts for the war effort."

I would like to ask the three of you Admiral Straw, General Winglass, and General McCausland, are you individually aware of occasions during the Persian Gulf conflict when the U.S. military or U.S. defense contractors had to seek help from foreign governments to get parts needed by American manufacturers for weapons or equipment?

Admiral **Straw**. Mr. Chairman, on the part of the Navy, we had no experience during Desert Storm where we had a problem because of unavailability of U.S.-provided spare parts or supplies—I have no knowledge of any urgent requirement to go to a foreign source.

Senator **Dixon**. I thank you. General Winglass.

General **Winglass**. Most of our continuing support for fielded weapons systems, as I noted earlier in my opening remarks, is derived from other service inventory control points, and particularly DLA. So the very minor involvement that we have as an overall systems manager would not likely reveal very many of those kinds of problems that are described in that article.

We do from time to time deal directly with foreign sources for various types of equipment included within rubric of that small inventory level that we manage. I do not have firsthand knowledge of any particular problems that we encountered.

For example, we do derive some direct parts support from the Republic of Korea industry. We get industrial support out of England in some cases, and others, Canada certainly. To the best of my knowledge, there was no insurmountable problems that we encountered, but we are only an extraordinarily small piece of this.

Senator **Dixon**. I suppose the logistics end of it, General McCausland, would be more conversant with these charges.

General **McCausland**. Yes, sir.

Senator **Dixon**. Do you have any comment?

General McCAUSLAND. I read that article the morning it was in the paper, and I immediately asked my staff about it, because at that point none of that had ever come to my attention. To answer your question directly, I am not aware of any case where we had to in fact do what the article said was done.

I have asked my public affairs officer to talk to the reporter to see if he will tell us what he was talking about in that article. We do in fact rely upon foreign sources for parts.

Senator DIXON. Of course we all know that.

General McCAUSLAND. As a matter of fact, I had my four hardware supply centers Commanders come in and brief their critical Desert Storm/Desert Shield items. They briefed details on 25 items each; none were foreign-sourced.

Senator DIXON. Could I conclude from that that you three gentlemen, who certainly ought to be in a good position to know in view of your responsibilities, doubt the statement that on nearly 30 occasions the administration needed help from foreign governments to get delivery of crucial parts during the Persian Gulf experience?

General McCAUSLAND. I have trouble with that statement.

General WINGLASS. I have no firsthand knowledge of that, sir.

Senator DIXON. Notwithstanding that article, I wonder if I could pursue that just a moment further before yielding to my colleague. I do not guess many Senators would have much trouble about dependence on Canada or England. Their long support and firm allegiance with us is so, I guess, beyond dispute that one would almost consider them part of our own effort.

General McCAUSLAND. Yes, sir.

Senator DIXON. There may be some other similar allies. Israel occurs as a possibility. But in large part I think beyond that one has to suggest that we live in a society where the enemies and friends change a little over the years, obviously, and we see that possibility always in the Middle East where, without opening old wounds, there was a time when Iraq was preferred over Iran, and certainly this Senator would have understood that at that time. I am not quarreling with it.

But that whole system over there changes so much. I presume we do bear that in mind in what we do when we do have this dependence on these foreign governments from time to time for some of these essential parts.

General McCAUSLAND. Yes, sir. I think that is the key to most of the parts that are foreign-sourced—and, by the way, about 70 percent are either Canada, U.K. or Germany—so that is the big bulk of those parts.

Senator DIXON. 70 percent?

General McCAUSLAND. Yes, sir. And the biggest one is Canada, by far the largest. If you go back and look at what we have foreign parts for, we essentially have foreign parts for equipment that we buy in foreign countries. We do not, of course, buy equipment in countries that are not allied to us in some way.

The Army has a snowmobile kind of vehicle they buy in Sweden, and therefore we will buy some parts in Sweden to support that vehicle. We buy a mortar in Israel. We bought our Beretta pistol that was originally produced in Italy, and some of those parts come in from Italy.

Senator DIXON. I remember that discussion years ago and we changed our small arms purchase at that time, as I recall.

General McCAUSLAND. The AV-8B Harrier, of course, is co-produced and some of those parts come from the U.K. The F-16 is co-produced, so some of those parts come out of the F-16 co-production countries.

I think principally we are tied with countries who we have longstanding relations with, and the parts that we buy are associated with those equipments.

Senator DIXON. I thank you. I can conclude from that, I think, that you all have reason to differ with that article. Is that a fair conclusion?

Admiral STRAW. It is a fair conclusion, sir.

Senator DIXON. I am going to yield to my colleague, who has another obligation shortly, and then we will come back to some other points.

Senator LOTT. Thank you, Mr. Chairman.

Admiral Straw, General Winglass, and General McCausland, we are delighted to have you here. Admiral Straw, I am certainly pleased to see you. I got the stamps you sent—an inside joke.

Senator DIXON. I understand.

Senator LOTT. You know, I talked to you while all this massive effort was under way and I know as we were moving from Desert Shield into Desert Storm you were working the logistics and you were shoving everything you could possibly get through the system to get it in place. It obviously worked quite well.

But I cannot help but believe that in some areas you reached the point where you were concerned about whether or not we were going to have enough munitions, ammunition, shells, equipment of any kind.

Can you give us just a couple of examples where, because of this process, you found that maybe we did not have enough supply in the system to deal even with a Desert Storm effort —which was massive but did not last very long?

If it had gone on for 6 months, 8 months, we could have had problems. Would you respond to that, Admiral Straw?

Admiral STRAW. Yes, Senator Lott. I will say overall that the Navy is very fortunate that it did not have any major parts shortages or ammunition shortages throughout the war. Our readiness levels were maintained at or above the Chief of Naval Operations' goals.

All six carrier battle groups performed superbly. So I did not come to any point in the war that I was terribly concerned that we were going to have a spare parts problem. I will talk to ammunition in just a minute.

The most major concern I had in the spare parts world was early on in our support of Marine aviation on the ground, especially in the helicopter area, where they were experiencing what I will call environmental problems with helicopter engines and dynamic components.

We quickly established very intense networks among our inventory control point in Philadelphia, our maintenance depots, and the private sector—the engine contractors, if you will—and we were electronically sending our requirements from the desert to the inventory control point, to the maintenance depots, and to the private sector in a matter of minutes.

We kept pace with demand requirements in some of those areas that exceeded seven times our normal peacetime demand by very intense management—basic ordering agreements that allowed us to go out and buy off the shelf, basic ordering agreements that allowed us to buy piece part spares, and the flexibility to allow our depots to work two and three shifts to keep up with the demand.

We had a little bit of nervousness early on in that field, but as the heat died down and the sand erosion leveled off and we got this intense network established, that problem went away. So in the spare parts world, with the exception of the Marine aviation support I mentioned, I really did not have a concern.

In the ammunition world, you always have concerns because you are never quite sure of the intensity of the operations. What are the sortie rates going to be? When is the ground war going to start? So we prepared for the worst.

I can give you a bottom line in ammunition that says while there were some concerns on a few individual general purpose level-of-effort bombs, in the aggregate we could have continued fighting at the rate of the 100-hour ground war for another several months without getting into extremes on any particular weapon, sir.

Senator LOTT. Admiral, I would like for you or either one of the generals or anybody at the Pentagon, if you have some examples or if you found some places where we have the potential for some shortages in the future, to let us know.

I know you want to put a positive face on this entire effort. I understand that. But I just still believe there were some areas where you could very well have had some shortages if it had gone on. We do not want to be critical; we need to know that so we can work with you in making sure that we provide you, hopefully, with the funds to get what you need.

One last question to you, Admiral Straw. When does the Navy feel they will have an estimate of O&M funding needs with sources in the fiscal year 1991 supplemental? The second part of that question is, do you feel like perhaps an extension to September 30, 1991, may be necessary?

Admiral STRAW. The answer to the first question, Senator Lott, is that we have provided our most updated estimate of our O&M requirement to the Department of Defense. I will leave that open to some possible increases as we bring equipments back and open them up and find that the level of repair is higher than we might believe it to be now.

But the answer to your question is, we provided that estimate and we feel that that estimate remains within the Navy's request and approval for the supplemental.

The answer to the second question I would like to take for the record and take back to our comptrollers for an answer.

Senator LOTT. I would like all three of you to do that, rather than asking each one of you. When are you going to know? If you think you may need more time, would you need an extension to September 30, 1991 or not? I think it would be important that we get that information.

[The information follows:]

Admiral STRAW. We are continuing to work with OSD regarding our needs associated with the fiscal year 1991 supplemental. We understand OSD recently submitted a request to the Congress for distribution of the supplemental to the services.

Regarding an extension of O&M funds past September 30, 1991, the vast majority of our O&M requirements will be taken care of this year. However, we do anticipate some expenses after September 30. We understand supplemental funding will be available beyond September 30, 1991 provided it is Desert Shield/Storm related. If that is not the case, an extension would be recommended.

General MCCAUSLAND. The recently approved supplemental should adequately fund DLA's Desert Shield/Desert Storm O&M requirements. I don't envision asking the Congress for further O&M support.

Senator LOTT. General Winglass, the Marine Corps depended heavily on the corps maintenance and support activities during the Persian Gulf activities. Defense Management Review actions and personnel cuts will affect those support activities in the future. Do you have an estimate of the potential impacts to the readiness and sustainability of the Corps?

General WINGLASS. The DMRs, as Admiral Straw described in his statement, within the Department of the Navy, particularly in the area of maintenance, I feel very comfortable that we are on track and we are going to feel very little impact.

Certainly I do not foresee negative consequences in the depot maintenance consolidation. I feel as though we have played heavily. We have been involved in the Department of Defense. Secretary McMillan's shop has kept us involved in the whole thing, and we have been able to influence the course and direction so some of our concerns have been allayed. So I do not think that is going to negatively impact on us, Senator.

Over on the supply side of depot consolidation, I am less sure of the eventual outcome simply because we have yet to conclude with the DLA people a memorandum of agreement that would establish what we do not do any longer but DLA does, and so it is hard for me to gauge what the outcome will be.

In terms of our organic capability for marines in the intermediate-level maintenance business, I do not think that the DMRs will have again any negative consequence.

I think hopefully it will be a positive consequence because recall that marines are for the most part a customer of somebody else, and since we are a customer those efficiencies and cost savings that General McCausland has been able to take credit for I would presume are passed along to the customer. So we are a benefactor in that regard and our costs would be lower.

So as a customer I am excited about it. As an operator, in the case of supply and maintenance, where we do have a role to play, I am excited in the maintenance corridor and perhaps a little apprehensive in the supply corridor, until we are able to complete our negotiations.

I do not see, at this point, any negative consequences.

Senator LOTT. Well, I realize it is hazardous to your health to be critical of DMR, so I will do it for you. [Laughter.]

Senator LOTT. I think it is going to cause tremendous problems. It is the type of thing that we have seen in the Pentagon in the past. It served us very badly in the past. I think it is going to cause tremendous problems for all of our services. I realize that you gentlemen in uniform, with your stars, have to be careful what you say.

But if you do not tell us now the potential damage that is being done, we are not going to know it until after it is done, and then we are going to be trying to put this genie back in the bottle 3 years from now or 4 years or 5 years from now at astronomical costs and with losses to the services.

So maybe the question really should be directed to you, General McCausland, for your response. You do not have to be critical of DMR specifically, but just in general maybe you could tell us how this is going to affect this particular area that you are working.

General McCausland. The three principal areas are contract administration, which is essentially behind us now. We have merged those activities and we are up and running with the Defense Contract Management Command. It went very smoothly.

The transfer of consumable items is the second major effort. That is not a small task. Moving 1 million items from the services to us for management is a large task. However, it is something that we have done before. We already manage 3 million items. There is a very elaborate procedure that does that, because every item is a large package of information—of drawings and prior contracts and technical information and inventory management records and all these things.

It is a very large task. You are talking about 1 million of those packages. We have done it before and there is a process to do that. The services have transferred items to us annually since DLA was established in 1963. So we think we can handle that.

Of course, we have to ramp up and hire people and get resources to do that as the items migrate over, but the time schedule is out to 1995, so I think there is enough time to do it. We have stuck very diligently to making sure that we do not race into this thing and do something wrong. We have been tough in holding the line on making sure that the schedule is realistic.

The third area, of course, is the consolidation of the military supply activities or distribution activities, the depot process. We currently run six depot operations. We have picked up the operation in California. We pick up the others, the major one in Pennsylvania, New Cumberland, next week. And this is done on a phased basis as well.

I think we have the people who are capable of running that, and I think we essentially are going to bring those folks under our wing, the folks who work in the Navy, Army and, in two cases, the Marine Corps. We think we can do that without a loss in efficiency and effectiveness, sir.

Senator Lott. General McCausland, in your testimony you said that you needed funds to modify and/or replace your Ohio facilities, and you mentioned, I think, an $89 million figure. Has that been requested to be included in the supplemental or are you looking for that to be in outyear funding?

General McCausland. No, sir. That is in 1992. It is not in the supplemental, sir.

Senator Lott. Okay. Thank you, Mr. Chairman, for allowing me to go on a little bit extra.

Senator Dixon. Thank you very much.

I would like to ask all three of you a question concerning the 1991 Joint Military Net Assessment that we received from the Joint Chiefs. I think it contains some alarming conclusions about our defense industrial base. The net assessment states: "The loss of sub-tier suppliers, manufacturers of sub-system components of larger systems, is a threat to our ability to field state-of-the-art weapon systems on a timely basis."

Since all three of you are directly responsible for supporting weapons systems in the field, I ask you have any of the three of you had firsthand experience of any problems from this loss of sub-tier suppliers so far?

Admiral STRAW. Mr. Chairman, the Navy has not experienced any significant problem with loss of sub-tier suppliers. In fact, the competitive efforts that the Navy undertook starting in the 1985 timeframe, known as the BOSS program—Buy Our Spares Smartly—actually increased the number of sub-tier vendors out there because of the competitive marketplace that we established.

So, no, I am not aware of a problem, sir.

Senator DIXON. Again, General Winglass, you are mostly a customer, I guess.

General WINGLASS. And I think that situation does not result in our having the same type of visibility that Admiral Straw or General McCausland would have.

Senator DIXON. It occurs to me that perhaps General McCausland really would know the most about it.

General MCCAUSLAND. I think, sir, we have had very similar experience to the Navy. We have more vendors today than we have had before, through a major effort of breakout, trying to go out and find more people and an effort to create greater competition.

It would be hard for me to say whether the quality of that vendor, the size of the vendor, the vendor financial status, and all these kinds of issues, are worse or better. I do not know. What they are really saying in the study, I think, sir, is that these companies that make major sub-assemblies for major pieces of equipment. I tend to deal with the people who make the parts. I am about two tiers below that level.

Those people tend to stay in operation relative to the next major assembler.

Senator DIXON. You say in your statement that we need to reexamine the U.S. industrial base for warstopper items. You mentioned rations, chemical protective suits, gloves and footwear, nerve agent antidotes.

General MCCAUSLAND. Yes, sir.

Senator DIXON. You know, I agree with you. Are we adequately protecting that? I will just give you an example. Perhaps because it is parochial, but I happen to come from Belleville, Illinois, near Scott Air Force Base. Belleville Shoe Company did 165,000 pair of those desert storm boots, and I suspect many of them did not even get into the hands of the troops because the operation ended before they had finished their work.

I was out there a few weeks ago when they were still completing their contract. But the point I want to make is that in another place in the proceedings recently, in my other life as a member of the Small Business Committee, we were getting into the question of the Federal prison system trying to get into the question of production of boots.

We looked at the fact that so many businesses are going out of business because of this kind of competition. My own investigation of the situation with respect to shoe companies suggests that foreign competition, together with this possible intercession by the Federal prison industries, is killing the domestic shoe business.

While that is not a big deal, in connection with the whole war effort question, it is interesting to me that you note rations, chemical protective suits, gloves, footwear. I presume we want to be sure we maintain those kinds of domestic industrial base support systems in our society.

General McCAUSLAND. I did not get a chance because Senator Lott did not get to me on his question, but what you are really talking about are some of the items that we had problems with during Desert Storm/Desert Shield.

Thank goodness we did not need the chemical protective clothing. We had enough there to initially equip the troops and get about two or three changes, but in the long duration we would have been in serious trouble. The atropine is a longstanding problem of trying to keep the industrial base open.

We did not have trouble buying the boots. We just did not get them fast enough. We had no inventory on boots. The desert boot is a new item to the inventory.

Senator DIXON. It was a different boot.

General McCAUSLAND. Exactly. I would have to say for a general statement that, as you well know, if we had to field a large army quickly there are not enough people to make the boots in this country. That would be a limitation on our ability to field a lot of forces. I do not think there is a likelihood of that, but it is certainly a problem and something we have to deal with.

What I was saying in my statement is that what we are going to do after Desert Storm/Desert Shield, is go back and reexamine how in fact we did that and what we need to do.

Senator DIXON. I did not mean to cut you off, but it occurs to this Senator that maybe I have an excessive concern about the defense industrial base. But as I see the shrinkage that has to take place over the next few years—and some of us here will probably resist it more than the average Senator will—we will try to be in the forefront of seeing that it is done in a very modern way and that we are adequately supplied, that our readiness and sustainability capabilities are there and so forth as we go about this downsizing.

But it occurs to me that there is this massive industry that is going to have to downsize too, and it occurs to me that in that process—I talk to some of the biggies sometimes right now, who are saying, you know, these dual requirements and all that kind of stuff, we cannot handle that any more.

I do not know how serious that is, whether they have other concerns when they suggest that. You gentlemen may have more expertise in that. But it occurs to me that down at the subcontractor supplier level that will really get acute soon, and I guess you are thinking that through.

General McCAUSLAND. That is true. We have had a longstanding effort in industrial base management and we have done fairly well.

A lot of items which we had to surge for the war came out of that base and they did very well, notwithstanding we had problem areas.

So our objective, of course, is to have a system where we can always keep a warm base on critical warstopper items so we can surge from that base.

Plus, the services will have prepositioned the items to immediately go to war, and we will then surge the base to meet that demand with the consumption of their first 60 days. But that is not easy, sir, and it is not cheap.

Senator DIXON. That same 1991 Joint Military Net Assessment goes on: "Insistence on domestic sources for U.S. defense systems may not always be prudent, but the United States must maintain access to needed materials and production means."

I would just like to ask all three of you would you like to see a greater insistence on domestic sources for key U.S. defense systems and components?

General WINGLASS. Well, I think we are always well served with a domestic source for the reasons an earlier question you had brought out.

Senator DIXON. I do not mean that as protectionist. I really think we need to have competitive challenges out there. I think we make better automobiles today because the Japanese make better automobiles. So I am not quarreling with the fact that you need competition.

But I am very much concerned about, again going back to that whole story about the changing friends and enemies thing that we have experienced certainly in my lifetime, going back to World War II, that we have to have this domestic industrial base to protect our concerns.

We all know, without going into the classified aspects of it, that even by our own sustainability rules this was a short war, so you cannot make a lot of judgment calls on some of that stuff by virtue of this experience. I think it is a valuable experience, but I still think that some of the lessons are not fully before us.

General WINGLASS. Well, some of the items that go beyond what General McCausland's command manages, for example, are dry cell batteries, managed by the Army's ComElec Command at Ft. Monmouth.

I think that is an area where we experienced very high consumption rates due to the heat as much as anything else. But we need a substantial industrial base with ready access.

Science and technology in the future, the very report you speak to, of course, examines science and tech and identifies for all of us some changing trends and tendencies there that I think are worrisome. You know, we have, for example, our new amphibious assault vehicle, which we buy only occasionally. We keep one in service for 20 years or so. We are approaching the requirements for a replacement vehicle now.

It is in R&D right now, but the AA program is one of great interest to us. It is futuristic in its approach and attitude, and I think that we would look for a U.S. industrial base to play a major role in the development of that system and so forth.

So you have hit on something that is important, just as Senator Lott did in the DMR area. I think that you are challenging us with some tough questions here this morning.

Admiral STRAW. Mr. Chairman, I would like to mention very quickly one effort the Navy has under way that I think you will appreciate is indicative of the Navy's efforts to get ahead of this power curve problem.

We have a joint effort with the State of South Carolina, and thanks to much assistance over the last 5 years from Senator Thurmond with funding, for the building of a state-of-the-art flexible manufacturing system that uses numerically-controlled machines, driven by computers using a digitized data base of three-dimensional drawings, with the goal of self-sufficiency on item production.

We build our own electronic library of drawings that we have bought from all sources, have them available for production on demand with the bottom line goal of reducing spare parts normal lead times from 1 to 2 years to 30 to 60 days. We have made a couple thousand of these parts using that technology, even though it is still in the prototype stage, during Desert Storm for support of Navy and Marine Corps aircraft, ships, and Army helicopters.

So the system builds a data base and gives us self sufficiency in the event that a contractor goes out of the business.

Senator DIXON. I think that is very good.

May I ask the three of you whether any of you—and Trent Lott, my colleague and friend from Mississippi touched on this—without trying to compromise you, because we do not mean this critically, did any of you experience any spare parts shortages during the Desert Storm operation that caused any operational problems of any kind?

Admiral STRAW. For the Navy, sir, we did not.

General WINGLASS. Well, sir, we had some spare parts that did present us with some challenges, yes. I can recall a bearing.

General MCCAUSLAND. The bearing on the tank. We got phone calls back and forth on a particular item.

Senator DIXON. A bearing on a tank?

General MCCAUSLAND. On a tank retriever, was it not?

General WINGLASS. No. It was on the logistics vehicle system. It was a truck. And there was some part that was connected with that system which became a problem and got our visibility up because we were having some down time with the vehicles.

But we worked. We threaded out of that problem and got a supplier, and, as a matter of fact, I think two were generated, and the problem was identified, dealt with, dealt with well, and made to go away.

In fact, that particular vehicle has been an all-star performer in the long haul over there. It has been very durable. Its mean time between failures has been good. It has recorded millions of miles of travel.

Senator DIXON. You know why I ask some of these questions, if I may interrupt you, General Winglass? The Congress is made up of people who come here through an elective system, and they are responsive to constituency interests, which none of us could honorably deny. Some of us who have been here a while become concerned whether that impacts sometimes on judgment calls we make on the DOD authorization bill.

Some things are more popular out there than others, have better and stronger constituency groups, and are just the kind of items that receive more public attention. We worry a little bit about whether we are doing enough in the mundane areas from time to time.

Now it has to be your responsibility to tell us, and if you do not want to tell us in public you should be telling our staff, because if we are short on anything we want to know about it, even if it is not a thing that is going to be very popular. We think it is our responsibility to try to fill those gaps. I am sure you have learned a lot of lessons in this experience that can be helpful to us in that regard.

We ought not to be cutting in areas where you think we ought not to be cutting if we can get the right information from you. That is why we say these things to you. Some of those things have no constituency group at all, you know, beyond the fact that somebody manufacturers it.

So it is really critical for us to know those things. If you can convey those to us, we would be appreciative.

General McCAUSLAND. Sir, if I could answer on the question about parts, we are the wholesaler, so we do not know exactly what is going on out there. But we have requisitions from the customer, from the Army, Navy, Air Force and Marine Corps. We had hundreds of items that we were working during that period of time, if not thousands—back orders from the various organizations, things we could not fill immediately, things we were working.

Glow plugs, a kit to repair a generator on a HMMWV. Two critical items, a fan belt on a HMMWV, which is one of these new serpentine belts, a one-belt-fits-all kind of deal and wheels on the HEMTT, which is that large Army vehicle that is a truck and is also a fuel mover, these are the kinds of things that we were managing.

Now the fact that I am aware of it, of course, says that it got my attention. I mentioned earlier that I had my four hardware Supply Center Commanders come in and they briefed their top 25 back orders for Desert Storm, so our flag officers in the field were working those items. But that is normal business.

We never can expect 100 percent. We are always going to have items we get in trouble over, but I am not aware of anything that really stopped something dead in its tracks or that a whole series of equipment was down—that kind of situation. And that is really what I think you are driving at.

Senator DIXON. Yes. Now in those parts of your inventory that have been depleted by Desert Storm, I presume you are doing the necessary things to replace that depletion in the DOD authorization bill that you are bringing to us this year. That is to say, you surely know better than we know.

General WINGLASS. Sir, much of that is in the supplemental.

Senator DIXON. I understand that.

General WINGLASS. We will rebuy with the supplemental funds that you recently authorized and appropriated.

Senator DIXON. Would all of it be in the supplemental? That is to say, the restoration of depleted supplies or bringing inventory back up to speed with respect to the experience of the Persian Gulf, would it all be in the supplemental, or will there be others we can expect in the authorization?

General WINGLASS. Well, let me answer that question. We have a $75 million MPS-related program in 1992 which is in fact part of restoring the MPS capability that we have.

Senator DIXON. The maritime prepositioned ships.

General WINGLASS. That is somewhat related to Desert Shield and Desert Storm, but we will not have completed the full restoration of that capability.

Senator DIXON. May I interrupt you at that point on that number? Why is that $75 million not coming from the foreign contributions in the Defense Cooperation Account? Can you tell me about that?

General WINGLASS. Yes, sir, because fiscal year 1991 will have concluded and we will not be able to obligate 1991 monies in 1992. So what we did was to make a proviso for ourselves because we knew that the MPS restoration effort would extend into at least the first couple of calendar months of fiscal year 1992, and that is what the $75 million is there to do.

Now it could be that from the Cooperative Fund there could be another 1992 supplemental, but, of course, we would not have access to that or those funds until it was acted upon, and that would itself require, as I understand it, an authorization and appropriation bill for 1992. Then you could deal with the supplemental.

So rather than interrupt this time line of reconstructing MPS we put that $75 million in there. We hope you are able to support it through authorization and appropriation to enable us to catch the end of the reconstruction of MPS. That is an issue you are going to have to deal with.

Admiral STRAW. Mr. Chairman, might I make a comment on that subject?

Senator DIXON. Please do.

Admiral STRAW. I would classify it this way. The incremental costs driven by wartime operating tempo, such as spare parts requirements, are paid for by the supplemental; normal peacetime deficiencies are included in the fiscal years 1992–1993 normal budget submit. So incremental costs are in the supplemental, and normal peacetime replenishment is in the fiscal years 1992–1993 submit.

Senator DIXON. All right. May I ask all three of you how much of the supplies, particularly rations and other consumable items, did you have on order when the conflict ended that you will not need or will not be able to use? Is there any of that?

General MCCAUSLAND. Sir, that is a very complicated question. I would be glad to give a very detailed answer to that, but as a general statement a lot of it is on order which we will not need, and we are in the process of phasing it out. But it is a very detailed issue and I would be glad to submit that, sir.

Senator DIXON. I wonder if you could accommodate us at your convenience.

[The information follows:]

Admiral **Straw**. I am not aware of any supplies on order as a result of Desert Storm/Desert Shield requirements which will not be consumed by fiscal year 1992. As mentioned in the prepared statement, we routinely maintain our forces on a wartime footing and, as a result, we did not need to order substantial mobilization supplies to support the operation. The material that was ordered was largely that needed to "top off" our deploying ships to ensure they were at maximum sustainability levels on deployment. The majority of this "top off" material will be consumed in fiscal year 1991. Any carry-over beyond fiscal year 1991 should be consumed in fiscal year 1992.

General **Winglass**. The Marine Corps, during the early stages of Operation Desert Shield and the buildup of forces and supplies in Southwest Asia, made continuous attempts to forecast demands and order/cancel outstanding requisitions accordingly. This validation process was intensified after successful conclusion of Operation Desert Storm.

Between December 1, 1990 and April 1, 1991, the Marine Corps processed approximately $145.0 million of confirmed cancellations from integrated materiel managers in the DOD wholesale-level supply system. Of this total, $79.8 million was accomplished during March 1991. Outstanding requisitions from the Supported Activities Supply System Management Unit located in Saudi Arabia (the first source of supply for all Marine units in-theater) were reduced 59 percent during March 1991 (from $138.5 million on March 7 to $56.6 million on March 29).

The Marine Corps deployed with and subsisted on Marine Corps prepositioned war reserve stocks until the Army was in a position to provide support. We defer to the Army as the executive agent to provide the details of rations on order when the conflict ended.

General **McCausland**. At war's end, we had on hand and under contract a total of $2.42 billion worth of rations. This was comprised of 314 million Meals, Ready-to-Eat ($1.335 billion); 106 million Tray Pack Ration meals ($347 million); 53 million Meals, Ordered Ready-to-Eat ($202 million); and 177 million B-Ration meals ($540 million). The Department of Army, as the Executive Agent for Food, provided food requirements which were intended to support the United States ground forces.

We have reduced the $2.42 billion figure down to a total of $273 million in accordance with the Army's changing requirements. This level includes rations on hand and deliveries due in.

Since the conflict ended, we have been terminating, modifying, and revising our contracts. However, termination costs are not available at this time because we are still in the process of negotiating final settlements on many of the contracts with the producers.

Senator **Dixon**. I think it was Admiral Straw that in his statement indicated our interest in this inventory business. We are interested. Of course my colleague and friend from Michigan is not here today, but he pursued that question so assiduously last year he almost wore us out. [Laughter.]

Senator **Dixon**. So in his absence, will whoever is here representing Senator Levin say that I did ask this?

This subcommittee spent a great deal of last year reviewing the issue of excess inventory. Last year, we heard there was $10 billion of excess inventory of secondary items in the DOD supply system; this year, the total DOD excess secondary item inventory is down to $8 billion. I guess the largest reduction in excess inventory occurred in the Navy.

Is this reduction the result of actual sale or disposal of excess items, or just a change in the definition of what is excess? Can you answer that for me?

Admiral **Straw**. I will, Mr. Chairman. I echo your comment about Senator Levin, and I thank you, by the way, for allowing us to come back and visit with your staff after the hearings and elaborate on the discussion we had in the hearings last year.

First of all, let me say that the excess that you are referring to is a segment of a portion of the inventory called inapplicable—that segment not required for use by customers in the apportionment and budget year—and that it is driven predominantly by material returned to the supply system as a result of modernization efforts.

As we mothball a ship or an airplane or we mothball a system on a ship or an airplane, we likewise mothball those spares, so they accumulate back in the system and are categorized into the inapplicable slices, one called potential excess—those that have been decreed should go to disposal—and the other category, which I will refer to as retention—those that should be kept for contingency purposes or for economic purposes.

Now specifically to your question. The Navy reduced its potential excess piece of that inventory from $6.8 billion to $3.2 billion over the last fiscal year, and the predominant driver of the reduction was $2.8 billion of that amount going to disposal.

Senator DIXON. You actually disposed of it?

Admiral STRAW. Actually disposed of it. It may not have been sold on the resale market yet, but it has been removed from our records, and transferred to the Defense Reutilization and Marketing Service.

Senator DIXON. Which is undertaking the disposal?

Admiral STRAW. Which is undertaking the disposal, but it is off the Navy records in the disposal process, out of or in the process of leaving our warehouses.

Senator DIXON. I would say that is fairly significant.

Admiral STRAW. Now, to be totally up front on the issue, sir, there is also recategorization of material from one retention category to another. For example, if you look at our supply support inventory report that comes to you every year, you will see a growth in the economic retention category. That is driven by two factors.

One, we make a final review prior to sending something to the junkyard as to whether or not we should keep it for contingency or economic demand-driven purposes. We do that because of the high variability in demand. We may categorize an item as headed for disposal in one stratification of our inventory, and between that time and the next quarterly stratification see a demand pop up on the scope for the item.

We would pull that item back from potential excess and classify it in the retention category of economic retention or contingency retention. So that category increased because of some pullbacks and from some additional input into the category from turn-ins generated from the fleet in fiscal year 1990 of material that has been replaced by modernized systems.

That is a continuously-flowing pipeline. Some new stuff comes in, some old stuff goes to disposal. Some is retained for economic and contingency reasons.

Senator DIXON. Very good.

General McCausland, I am not picking on you, but DLA does not seem to have made any progress in reducing its level of excess inventory in the last 3 years. I wonder if you would respond to that before Senator Levin asks me why I did not ask it.

General McCausland. Yes, sir. I may have to give a tutorial, because some of the terms I use are a little bit different than what Admiral Straw uses, but I think I can talk to the general problem.

We have a very active program to reduce our inventories and I think we are making some progress. To start with, we are selling more than we are buying. In 1989, we were $300 million to the good, in 1990 we are $600 million to the good. That automatically drives down your inventory, and that is going in the right direction. So our operating stocks are down.

Our war reserves are relatively level. We do have an increase in retention stocks and that drives the total long supply. Our true excess is down $52 million, and that reflects items which have in fact been turned over to the disposal system.

The reason our retention stocks are up is, when you want to buy less then you have to adjust your levels accordingly and the items which you have in the operating stocks go into retention stocks. We also have, as I mentioned earlier, these 1 million items that we are receiving from the services. We will continue to receive those items, so they make our total inventory go up.

At the same time, of course, we go through an annual restructuring of the price structure. We revalue the inventory, so it is automatically going to go up because of the way we do the accounting of the value of the inventory.

But I do believe that we are doing very well. Desert Storm and Desert Shield did in fact stop some of those efforts as people put their attention on other things. I think that was true across the services because we did not see the items come into our disposal yards that we had anticipated.

We anticipated a tremendous disposal growth. We got a growth, but it was not quite as high as we had thought because the services were working other things.

Interestingly enough, though, sir, some of the items which were in retention stocks were used in the war, everything from sandbags to 800,000 yards of desert camouflage material which we were holding. That is exactly what you saw on TV because we put it right into our factory or gave it to contractors to make those desert uniforms.

So there is a whole list of items—body armor and other items—that were, at the time, in our retention stocks.

Senator Dixon. Some of the excess became useful.

General McCausland. Yes, sir. I think I mentioned this last year, but if you take a snapshot of what is in retention stocks and then go back 4 years later, I think it is less than 7 or 8 percent of those items are still there. Something has happened to them. They have moved in and out. They have either been disposed of or they have gone back into operating stocks.

So it is a very dynamic process and with all the changes that are going on and the movement of items to us, it is very difficult to pin it down. But I believe the major statistics, that mean something, are going in the right direction.

Senator Dixon. Thank you very much. I am going to conclude in a moment, gentlemen. I know you have other obligations through the day. Let me ask you, Admiral, some things that are more particularly a matter of concern regarding the Navy's interest.

One of the Defense Management Review initiatives that was controversial last year was the Defense Department's proposal to compete depot maintenance workload between government and private facilities. Particularly our House colleagues, as you know, had problems with that. They thought that competition could cause DOD maintenance facilities to be reduced or even closed.

Can you tell me what the Navy's experience has been with this public-private competition for depot maintenance?

Admiral STRAW. We have had a high degree of success in our Naval Air Systems Command competing among our own organic depots and the private sector, and we have driven our costs down significantly.

Senator DIXON. Could you give me one or two quick examples of the kind of competition that you reference?

Admiral STRAW. I am talking principally the F-14. Could I allow Mr. Cocchiola, sir, from the Naval Air Systems Command to elaborate on that point?

Senator DIXON. Would you identify him for the record so my reporter can get it? Would you come up here, sir, and identify yourself for the record?

Mr. COCCHIOLA. Good morning, Senator. I am Mike Cocchiola from the Naval Air Systems Command. I am Executive Director for Aviation Depots.

Senator DIXON. Thank you.

Mr. COCCHIOLA. You asked about public versus private competition. We have had some significant successes. We began competing on the air side in about 1987 with two major programs; the F-14 Standard Depot Level Maintenance or SDLM—that was an in-house program in our aviation depots—and the P-3/update 3, which is a modification. Update 3 MOD was a new program that was not in the depot sphere at the time of the competition.

Both competitions were open to public and private bidders. They were won by the Navy aviation depots. For example, on the F-14, the unit price of an F-14 SDLM dropped, as a result of the competition, from about $1.5 million per copy to about $1.1 million or $1.2 million per copy, and the fleet is getting a better, higher quality aircraft.

On the P-3, the price that was eventually bid was about 28 percent below the government estimate of what that would have cost, and the Aviation Depot, Jacksonville, that won that contract, is producing and has produced those P-3s below what they originally bid. The funds that are saved are turned into additional product for the fleet.

So we have had significant success. The aviation depots have also been competing for small manufactured items and component rework and have been moderately successful, winning about 60 percent of the competitions. The average savings is about 20 percent. These are concrete examples.

Senator DIXON. We appreciate that contribution.

Admiral STRAW. Mr. Chairman, I might add that the Navy's competitive thrust has been captured under the Department of Defense DMRDs 908 and 909, and if you look closely at these DMRDs you will see a large piece of the savings in the outyears becoming a result of interservicing and competition of aviation maintenance.

The competition effort in the Navy is also going to be used by other services. The budget requests reflect those savings.

Senator DIXON. Admiral, let me ask you one last question here on the Navy's aircraft depot maintenance program and the backlog. The fiscal year 1991 figure of 123 airframes overdue for scheduled maintenance is almost twice the 1990 level, the first time in at least a decade that the figure has gone over 100.

Have you concern about that?

Admiral STRAW. We certainly are watching it closely, Senator. We have built our budget providing a best balance, given the funding constraints that we have as our logistics tail is downsized with the force structure. But our goal is to sustain the readiness that we are achieving today.

As you heard earlier in the testimony, we have a commitment to maximizing our efficiencies, with the goal of lowering those maintenance costs as we proceed through the next couple of years. As we lower the cost, we will hopefully be able to lower the backlog, get more bang for the buck.

Senator DIXON. Staff, if I may interrupt, Admiral, suggested one of every eight Navy aircraft is going to be overdue for maintenance in 1993 if we continue to maintain this course. I am sure that concerns you. I am not trying to be a pest about it, but if you have some concerns about it I hope you will bring it to the committee.

Admiral STRAW. The calculation is closer to 1 of 11, and yes, we are watching it very, very closely. We will rebalance to the maximum extent we can within given resources and will certainly come back for help if necessary in future budget windows, sir.

Senator DIXON. Well, let me say to the three of you I am not going to pursue this further. I have taken up enough of your time this morning. If I can only leave you with this. This subcommittee in many respects touches upon—again I would use the term—some of the mundane stuff, not too exciting out there—depot maintenance and things of that kind, but the important stuff, as we see it every time we have an experience like Desert Shield.

I hope you will feel free, if you do not want to say in public sometimes what your thoughts are about this, to talk to staff here about major concerns you have. I am not at all a shrinking violet and when the subcommittee chairman sit down with the Chairman of the committee and we argue about how we divide the pie I have been successful sometimes in getting extra money for some of these things that do not have much of a constituency group out there.

I hope you will remember that I am prepared to plead your case and as the pie gets smaller and smaller you need a louder advocate. I hope you will come to me with your concerns. We will do the best we can to do the right kind of a job for you.

This meeting is adjourned. Thank you all.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

Senator THURMOND. Admiral Straw, I have been told that under the DMR consolidation of Depot Facilities the Navy was impacted to a greater extent than the other services. Could you provide us your evaluation of the scope of the consolidation and do you agree with the statement that the consolidation has a greater impact on the Navy?

Admiral STRAW. The consolidation initiative has resulted in substantial changes in our depot industrial policies, procedures, and priorities. Some examples are aircraft and engine single siting, consolidation of component repair and other workload, and a significantly increased level of public/private competition.

The consolidation appears to have a greater impact on Navy because a larger portion of the savings target has been assigned to Navy in the fiscal years 1991-1995 timeframe. The reason for this larger share is that we have a more mature competition program than the other services and are in a position to achieve larger savings in the early years of this initiative. We do feel these DMR savings targets are achievable.

Senator THURMOND. Admiral Straw, figure 5 of your prepared statement reflects an increase in surface munitions days of supply over the next 2 years. Since I believe it is important to maintain our ammunition production base, would you explain what specific type of ammunitions this entails and what is the basis for this increase?

Admiral STRAW. The growth is in ship gun ammunition, small arms and pyrotechnics. It represents continued progress in our efforts to meet the DOD goal of 60 days on hand.

Senator THURMOND. Admiral Straw, although the workload at our eight Naval shipyards will be declining over the next several years, I believe the Navy can do a better job in projecting the workload assigned to a specific yard and thereby ensure stability for the civilian work force. Please explain to the committee what efforts the Navy makes to ensure the workload is equally distributed to the eight public yards?

Admiral STRAW. The Navy distributes its depot maintenance workload through annual Fleet Maintenance Scheduling Conferences. These conferences are sensitive to the effects of declining workload on each of the shipyards and consider the labor situation in each area when assigning workload. However, there are limits to our ability to spread the pain—not all shipyards are capable of working on the same kinds of ships. Our ability to evenly disperse ship repair workload over the naval shipyards depends on a number of assignment considerations such as homeport (and the need to minimize family separations for ships crews) type of ship (nuclear/nonnuclear, surface ship/submarine), and shipyard capacity. Within these limitations, we do the best we can to equally distribute workload.

Senator THURMOND. General McCausland as you well know I am a supporter of our Nations's Textile Industry. I understand that during Desert Storm, the Defense Logistics Agency procured over 1 million sets of desert uniforms, and over 370,000 sets of chemical suits. Were any of these items procured offshore, if so what were the items and why? Additionally, how responsive was the industry to your needs?

General MCCAUSLAND. None of the desert uniforms or chemical suits were procured offshore. Industry was most responsive to our needs and desert camouflage uniform shipments began about 80 days after award of the contract. I might add that additional contractors were found for the chemical suits, and deliveries doubled from the pre-Desert Storm period.

Senator THURMOND. General McCausland, as the Defense Logistics Agency assumes the wholesale distribution responsibility can you incorporate the services' automations system or will you be developing a complete new system? If you plan to develop a new system has that cost been considered in the projected DMR savings?

General MCCAUSLAND. The assignment of the DOD wholesale distribution mission to DLA has led to an effort to develop an automated system to support the consolidation. We are not developing a new system. Rather, we have undertaken an effort to interface portions or existing systems. This hybrid system, which is called the Defense Distribution System or DDS, consists of portions of DLA, Navy, Air Force and Army systems, and will be interfaced with all the components' existing systems. DDS is to be implemented in support of the Bay Area Consolidation prototype in Northern California, beginning in May of this year. When the DDS is operational, we will evaluate the results along with other alternatives and determine the best way to proceed to support the remainder of the consolidation sites. At those sites where an Automated Materiel Handling System is already in place, we intend to interface the DDS with the software controlling that automated system and utilize the existing capability to the maximum extent possible.

The costs associated with the implementation of the DDS have been considered in the projected DMR savings.

Senator THURMOND. General McCausland, what impact will the consolidation of logistics facilities under the Defense Logistics Agency have on your civilian work force?

General McCAUSLAND. Consolidation of all DOD Distribution Functions under the Defense Logistics Agency will allow us to streamline our operations, eliminate duplication and reduce the total DOD Distribution work force from approximately 25,000 down to 19,500.

Senator THURMOND. General Winglass, as the Marine Corps reconstitutes the Maritime Prepositioned Ships at a cost of $75 million what if any improvements are you making in regard to what equipment and supplies are stored on these ships?

General WINGLASS. The improvements we will make to Maritime Prepositioning Ships (MPS) during reconstitution are those for which we began planning over a year ago. They include, for example, replacement of the M-60 tanks with M1A1 tanks, modification of the Assault Amphibious Vehicles with an upgunned weapons station and replacement of the self-propelled howitzers with additional towed howitzers. In addition, we will adjust the mix of ground and aviation ordnance on each MPS squadron based on the lessons we learned from operations in Southwest Asia. We will also use this unique opportunity to implement a new operational concept for MPS that was developed over the past 2 years. Each MPS ship will be reloaded to support deployment of a variety of Marine Air-Ground Task Forces (MAGTF) from a Special Purpose MAGTF up to the Full, Marine Expeditionary Brigade-sized Maritime Prepositioning Force.

Senator THURMOND. General Winglass, although we all like to focus on the success of Operation Desert Storm, there were shortcomings. What do you consider the most significant logistic shortfall experienced by the Marine Corps during the operations?

General WINGLASS. The biggest logistics challenge we faced was developing in the theater of operations the "heavy" support services and resources which are not an inherent part of a Marine Air Ground Task Force's (MAGTF's) capabilities. MAGTFs are designed to be readily deployable, expeditionary forces which can be logistically self-sufficient for up to 60 days. Our emphasis on being rapidly deployable with accompanying staying power means that we are able to deploy quickly, ready and able to fight and win. However, like all expeditionary forces, MAGTFs will eventually require resupply and may need additional, specialized equipment/service support from other organizations. Therefore, in accordance with routine CINC plans and orders which establish common theater support for all a unified command's service components, we rely on theater support for common supplies and additional equipment/services in protracted campaigns such as Desert Shield/Storm. Desert Shield plans for common theater support proved to be overly ambitious for some services and commodities, for example, line haul transportation and food supplies. Extended supply lines and the large scale of requirements meant that some of the dates originally established for theater support agencies to assume their responsibilities were not achieved, and had to be revised. Fortunately, we found we could provide parent service support for Marine Central Command (MARCENT) longer and more effectively than anticipated, host nation infrastructure was extensive and very effective in satisfying some of our requirements, and U.S. Central Command (CENTCOM) and its components were able to work together to resolve shortfalls and delays in implementing theater common support.

QUESTIONS SUBMITTED BY SENATOR TRENT LOTT

Senator LOTT. Admiral Straw, throughout your statement for the record you praise the Navy logistics and supply infrastructure and the contributions they made to Desert Shield/Desert Storm. Under the DMR consolidation plans, a number of these activities will be either eliminated, reduced, transferred and/or consolidated. What do you feel the impact will be on your service's ability to respond and support a Persian Gulf type operation in the future?

Admiral STRAW. We structured our budget submission carefully to preserve our ability to provide a consistent level of support to the forces remaining after our downsizing and restructuring are complete. Our plans consider reactivation capability wherever possible. In some cases, such as the restructuring of our maintenance organization, we will increase reliance on commercial sector support in the event of surge requirements. We feel the actions being taken are the best mix to preserve the readiness of our remaining force structure, maximize our surge capability, and remain within overall funding restrictions. We have been careful to ensure adequate oversight mechanisms are established to monitor implementation of our downsizing/restructuring actions. Examples of such oversight mechanisms include the Defense Depot Maintenance Council, the Defense Material Management Board, and the Joint Logistics Commanders.

Senator LOTT. Admiral Straw, last year and again this year, the services are being accused of excess spares and secondary items. They say it will get worse when you receive material back from the Persian Gulf region. What is your opinion of these charges and is there anything the Congress can do to help besides no more "external limitations"?

Admiral STRAW. We do not envision any significant increase in inventory levels as a result of Persian Gulf returns. As mentioned in the statement, we routinely maintain our forces on a wartime footing and, as a result, did not see a significant surge in requirements related to Desert Storm. The majority of the "top off" material loaded onto our ships for Desert Storm will be consumed in fiscal year 1991. Any carry-over beyond fiscal year 1991 should be consumed in fiscal year 1992.

Reference to restraints on "external limitations" relates to our conviction that we are on the right track and making real progress in improving our overall inventory management. Our top leadership is committed to these improvements. As outlined in the statement, in fiscal year 1990 we disposed of over $2.8 billion and reduced orders by $1.3 billion. We are continuing these efforts in fiscal year 1991, as well as pursuing additional initiatives. I believe we have both the commitment and the capability to continue our pursuit of inventory management improvements without need for further incentives.

Senator LOTT. Admiral Straw, when does the Navy feel they will have an estimate of O&M funding needs with sources in the fiscal year 1991 Supplemental? Would you recommend an extension of the availability of funds past September 30, 1991 for either all or parts of the O&M funds?

Admiral STRAW. We are continuing to work with OSD regarding our needs associated with the fiscal year 1991 Supplemental. We understand OSD recently submitted a request to the Congress for distribution of the Supplemental to the services.

Regarding an extension of O&M funds past September 30, 1991, the vast majority of our O&M requirements will be taken care of this year. However, we do anticipate some expenses after September 30. We understand Supplemental funding will be available beyond September 30, 1991 provided it is Desert Shield/Storm related. If that is not the case, an extension would be recommended.

Senator LOTT. Admiral Straw, are the O&M funds for fiscal years 1992-1993 based on the directed force structure levels in the fiscal year 1991 Appropriation and Authorization Acts or the relaxed levels? If the relaxed levels, are requested funds adequate to support activity?

Admiral STRAW. The Navy's O&M funds for fiscal years 1992-1993 are based on the directed force structure.

Senator LOTT. Admiral Straw, as you refer to in your statement, the ship overhaul and repair funding and force levels will be reduced substantially in the next few years. This will have an effect on both public and private yards. How does the Navy plan to deal with these cutbacks and still provide an adequate base for overhaul/repair and surge requirements?

Admiral STRAW. Maintaining an adequate ship repair industrial base in the face of force structure reductions and declining budgets will be one of our biggest challenges in the decade ahead. We are very concerned about workload reductions in both public and private shipyards. Although we try to assign as much repair work as possible to the private sector, Navy ship work alone will not be sufficient to sustain the private shipyard repair base in the years ahead. In the case of Naval shipyards, we are currently executing a carefully structured downsizing plan which will balance work force with the declining workload while retaining critical skills.

Senator LOTT. Admiral Straw, are you ready to recommend additional increases and dependence on forward storage and prepositioned stocks at this time or do you prefer to wait on the mobilization study recommendations?

Admiral STRAW. I am not prepared to recommend changes to our prepositioning policies at this time. The Navy is currently reviewing the issue of forward storage and prepositioning. Operational commanders, the Joint Staff and the OSD staff are also involved in this effort. It would be premature for me to speculate on the outcome of the review. I do not, however, expect any substantial change in Navy positioning policies since most of our requirements are covered by afloat inventories and the backup provided by the logistics support pipeline described in my statement.

Senator LOTT. Admiral Straw, what is your recommendation for having forward overseas maintenance facilities and contracts to support U.S. deployments, either full-time or emergency actions, such as the Persian Gulf operations?

Admiral STRAW. Forward overseas maintenance facilities and contracts are essential in providing support to forward deployed naval forces. Such facilities and contracts are in existence and were utilized in support of Persian Gulf operations. I would like to emphasize however, that the Navy is extremely selective in assigning maintenance workload to these overseas sources to ensure we are in full compliance with the law in restricting overseas maintenance performed on U.S. homeported ships to emergent repairs.

Senator LOTT. Admiral Straw, in relation to Desert Shield/Desert Storm operations, are the additional training costs incurred going to be recovered as an incremental cost? If not, why not?

Admiral STRAW. We believe that any additional training costs incurred as a result of Operation Desert Shield/Storm will be covered by the Supplemental.

Senator LOTT. Admiral Straw, the Navy has a number of unique environmental concerns which must be addressed. The Navy is the largest user of Halon and other ozone depleting substances. What is the status of efforts to eliminate their use and/or find acceptable substitutes? Off-shore and on-shore discharges from Navy ships is also being increasingly regulated. On board storage and ship modifications may be required. How is Navy staying ahead of these restrictions, and are the actions affecting Navy operations?

Admiral STRAW. The Navy has a comprehensive plan to reduce and eventually eliminate ozone depleting substances (ODSs). Our efforts to eliminate unnecessary uses and conserve CFC refrigerants, CFC solvents, and Halon firefighting agents have focused on chemical substitution, recovery and recycling. A major accomplishment has been the elimination of over 60 percent of the Navy's consumption of Halon 1301, by substituting an environmentally safe substitute (SF6) for testing Halon 1301 fire protection systems. This year the Navy began purchasing Halon 1211 and R-12/R-22 recovery/recycling equipment. We are now investigating methods to recover and recycle CFC-114 refrigerant and Halon 1301.

The initial baseline inventory of 1989 Navy-wide uses of CFC refrigerants, CFC-113, methyl chloroform, and Halons has been completed, and the 1990 survey is underway. We are now assessing the need for strategic reserves of these chemicals to cover the period between the end of chemical production and complete conversion to alternative technologies.

To stay ahead of new and projected restrictions on off-shore and on-shore discharges, we have a goal to design future ships that can operate within environmental regulations in the 21st century.

Substantial progress has been made already: oil-water separators are installed on about 50 percent of Navy ships; installation of Navy-developed trash compactors will begin in 1992; and Navy-developed solid waste pulpers and plastics waste processors will be installed beginning in 1994 and 1996, respectively.

One difficulty we face is predicting what will be considered nonpolluting discharges in the territorial waters of certain nations, particularly the United States. To deal with the uncertain discharge regulations in the United States and identify effluent quality requirements, we are working to get uniform national discharge standards established for all DOD vessels. If we achieve uniform discharge standards for all our ships in all U.S. waters, we can focus our research programs on treatment systems capable of meeting known standards.

Senator LOTT. Admiral Straw, the size of the Navy force is being reduced and the number of ships is being reduced. Ship and aircraft overhaul and modification actions may be reduced in concert with the smaller force and more reliable weapon systems. These statements would tend to justify a smaller infrastructure, fewer shipyards, and depot consolidation. However, if you take these actions you restrict your ability to surge and react to regional and global conflicts. How are you planning to balance and fund these ingredients to protect naval forces and support activities for future surge requirements?

Admiral STRAW. The Navy is reducing both force structure and shore infrastructure in a manner which fully considers the critical balance to which you refer. We structured our budget submission carefully to preserve our ability to provide a consistent level of support to the forces remaining after the downsizing and restructuring are complete. Our plans also consider reactivation requirements wherever possible to provide organic surge capability where it makes sense. In some cases, such as the restructuring of our maintenance organization, our actions will naturally increase our reliance on commercial sector surge support. These are hard decisions which must be made to live within our projected budgets. In each case we feel, however, that the risk is within acceptable limits.

Senator LOTT. Admiral Straw, under the Defense Management Review (DMR) and subsequent report, large cuts were made in operation and maintenance (O&M) funding based on "projected savings" from depot consolidations and closures. But the "savings" appear to result almost entirely from less funds available, rather than management decisions generating savings which in turn could allow cuts in funding. This is a classic example of taking credit for cuts disguised as savings. In your opinion, are these consolidations and changes to depots moving too fast? Are there better ways to proceed in this very delicate build-down of depot capabilities? Would you rather the cuts to O&M depot funds be made based on proven savings or would you prefer the cuts to meet budget targets, drive the resulting structure?

Admiral STRAW. The DMR process is an aggressive approach to dealing with the difficult issue of sizing the Department of Defense support establishment in an era of decreasing funding levels. The process, which includes service participation—many of the ideas were originated by Navy—has been successful in identifying initiatives which will lead to reduced costs of operations in our support infrastructure, thereby protecting a greater portion of our force structure and ensuring the readiness and sustainability of the remaining forces.

As painful as the process can sometimes be, it is necessary because it provides a coordinated way of identifying efficiencies which affect the entire Department of Defense. If the funding reductions were merely spread to the individual services for internal action, we would lose the benefit of DOD-wide initiatives provided under the DMR. As to the timing of implementation, we certainly would prefer to move more slowly if more time were available. It will not be easy to implement the DMR initiatives and achieve the intended savings. Nonetheless, our funding will continue to decline and at a much faster rate in the 1990s than in the 1980s. If we are to meet the challenges of this decade with a combat-ready Navy, we simply must reduce infrastructure costs. I know of no better overall approach to do so than to pursue the DMR initiatives.

Senator LOTT. Admiral Straw, a large degree of consolidation and grouping of support, construction, and personnel funding has been made at the DOD level, after the individual services submitted their budgets. These funds have been placed in the Defense Business Operating Fund (DBOF). When the budget requests are reviewed by Congress, we will examine the funds under both the original and grouped titles. It is not clear at this time how the funds will be authorized and appropriated. Do you have a preference on how funds should be reviewed and reported back to your services?

Admiral STRAW. We have no preference, but would anticipate funds would be reviewed and reported back such that they track with the President's and OSD budget submission.

Senator LOTT. Admiral Straw, to meet the ammunition, spare parts, and support needs of the Persian Gulf, the services contributed from their reserves. Have plans been made to ensure your service will eventually be restored with adequate quantities of these supply items to meet command taskings? Will they be funded from the fiscal year 1991 Supplemental or from fiscal years 1992–1993 and outyear budget requests?

Admiral STRAW. We plan to use the Supplemental to restore war reserves consumed or damaged in Desert Storm. At the same time, we, along with OSD and the Joint Staff, are reviewing war reserve requirements in light of our Desert Storm experience and other changes in the world situation, and we would anticipate submitting revised requirements in future budgets.

Senator LOTT. General McCausland, under the budget submission and in concert with a large degree of consolidation trends, the Defense Logistics Agency (DLA) will be expanded to absorb them. Is the DLA ready or will DLA be ready when required?

General MCCAUSLAND. We have been working in concert with the OSD staff and the military services to ensure that any consolidations or transfers are done in a manner that minimizes disruptions to our customers. Those efforts, to date, have been extremely successful, so I would have to say that we will continue to be ready to accept the mission expansions as they occur.

Senator LOTT. General McCausland, I noticed in your statement for the record, you need funds to modify and/or replace your Ohio facilities. As more and more consolidation takes place, it is suspected that additional funds for construction, equipment, and people will be required. These have not shown up in the budget yet. Are all of these additional costs of consolidations being considered when the analysis and decisions are made to consolidate activities and shut down the individual service activities?

General MCCAUSLAND. Yes sir, all costs of consolidation have been carefully scrutinized. For example, in the supply depot consolidation, our additive costs are identified for program management/implementation teams at Headquarters DLA and the three regions plus the fielding of a single information management system, the Defense Distribution System. Additionally, DLA and the military services reviewed the proposed military construction programs and delayed or canceled any project that could not be completely justified. We have no plans to shut down individual service depots at this time.

Senator LOTT. General McCausland, there remains some deal of debate as to whether the wholesale supply functions at the service depots should be transferred to the DLA. Lead times and stock levels would have to be adjusted to ensure depot activities are not impacted. What is the status of this transfer? If transferred, can DLA meet depot delivery requirements?

General MCCAUSLAND. As single manager of all distribution functions in DOD, DLA will have the flexibility to position stock to support the services' requirements. Our experience with the Bay Area Prototype has been excellent—there was no discernible difference to those ships outloaded by either DLA or the Navy at Oakland in support of Operation Desert Shield. We are improving performance while reducing cost. To date, two supply depot consolidations are complete. Sharpe Army Depot and the distribution functions at Oakland Naval Supply Center consolidated with DLA's Defense Depot Tracy in June 1990 to form the Bay Area Prototype. The Prototype will be completed with the consolidation of the distribution functions of Sacramento Army Depot and Sacramento Air Logistics Center in mid-April 1991. The New Cumberland Army Depot will consolidate with DLA's Defense Depot Mechanicsburg, also mid-April 1991.

Senator LOTT. General McCausland, are you ready to recommend additional increases and dependence on forward storage and prepositioned stockage at this time or do you prefer to wait on the mobilization study recommendations?

General MCCAUSLAND. I prefer to wait for the results of the mobilization study to determine what assets and in what quantities should be prepositioned to support mobilization.

Senator LOTT. General McCausland, a large degree of consolidation and grouping of support, construction, and personnel funding has been made at the DOD level, after the individual services submitted their budgets. These funds have been placed in the Defense Business Operations Fund (DBOF). When the budget requests are reviewed by Congress, we will examine the funds under both the original and grouped titles. It is not clear at this time how the funds will be authorized and appropriated. Do you have a preference on how the funds should be reviewed and reported back to your services?

General MCCAUSLAND. Sir, the congressional preference for review is not my call, but let me explain that I favor the DBOF account because it affords DLA the opportunity to respond to customer demand. That has not been the case when appropriations are made directly into the DLA account. For example, if this Congress authorizes and appropriates $2 billion to cover my cost of operations, then I can be forced into making some poor business decisions should the demand placed by the Armed Forces for my services cost $2.2 billion. As you can see, I would have to make up a $200 million deficit. However, under the DBOF, if the Armed Forces want $2.2 billion worth of services, then they will pay for it. Conversely, should our customer demand only $1.8 billion for our services, we're not able to spend $200 million of an appropriation that could not be justified under the DBOF concept.

Senator LOTT. General Winglass, when will the Marine Corps be able to accurately submit a request for Desert Storm O&M funds from the fiscal tear 1991 Supplemental? Would you prefer an extension of availability into fiscal year 1992?

General WINGLASS. Subsequent to passage of the fiscal year 1991 Supplemental, the Marine Corps was required to reevaluate our requirements for O&M funding. At that time, it was our best estimate that we would need approximately $1,105 million of the $1,205 million included in the Supplemental. We feel our estimate is still accurate but reevaluate it on a continuing basis as forces redeploy and requirements for funding to reconstitute those forces become more well defined.

We would like to have the flexibility that would be provided by an extension of availability into fiscal year 1992. This is especially true for the reconstitution of our Maritime Prepositioning Forces (MPF). We are well underway on an ambitious schedule for reconstitution of the MPF. However, it is likely that we will incur some contract and labor costs as part of this effort that will be fiscal year 1992 obligations.

Senator LOTT. General Winglass, the Marine Corps heavily depended on their corps maintenance and support activities during the Persian Gulf operations. Defense Management Review (DMR) actions and personnel cuts will affect these support activities. Do you have an estimate of the potential impacts to the readiness and sustainability of the corps?

General WINGLASS. The DMR actions will certainly cause us to make changes in the way we currently do business. All this means, however, is that we must be more efficient with the application of our resources and operate under cooperative management principles between the services and the Defense Logistics Agency (DLA). Given the cooperative spirit which has been exhibited thus far and the commitment to achieve the DMR objectives, I foresee no significant impact on the readiness and sustainability of the Marine Corps.

Senator LOTT. General Winglass, are you ready to recommend additional increases and dependence on forward storage and prepositioned stockage at this time or do your prefer to wait on the mobilization study recommendations?

General WINGLASS. We are not ready at this time to recommend additional increases and dependence on forward storage and prepositioned stockage. However, we are reviewing where we are, and taking steps to add to the effectiveness of our current programs.

The anticipated high cost of establishing and maintaining multiple regional land prepositioning programs would appear to be prohibitive for the Marine Corps. We expect our contribution to purely regional geographic prepositioning will continue to be our sole land prepositioning program, in Norway. There we are sited to support a naval campaign in Europe's northern region.

The Marine Corps and Navy will continue to emphasize maritime prepositioning which is capable of global response. We are reconstituting our three maritime prepositioning force (MPF) equipment sets to give them even more flexibility than they had before they were committed to Desert Shield. We are developing deployment data force module enhancements for each MPF which will facilitate tailoring MPF employment to specific crisis situations. These situations may require anything from a special operations capable Marine Expeditionary Unit (MEU) of 2,600 marines and sailors, to a full strength mechanized Marine Expeditionary Brigade (MEB) of 16,500 (one MPF equipment set), or even, as in Desert Shield, more than one MPF. We are also reviewing our MPF program to determine if prepositioning additional MPF equipment sets would be a cost effective way to increase our utility in a crisis.

The Mobility Requirements Study, which is in progress now, may lead us to undertake additional initiatives for adding to our responsiveness in the future.

Senator LOTT. General Winglass, in relation to Desert Shield/Desert Storm operations, are the additional training costs incurred going to be recovered as an incremental cost?

General WINGLASS. Yes. The Marine Corps will recover all of the incremental costs incurred in support of Desert Shield/Desert Storm.

Senator LOTT. General Winglass, the Maritime Prepositioning Ships Program (MPS) was a great success in the Persian Gulf. Restocking of these ships and expansion of the program is expected. Does the Marine Corps plan to restock and expand the program, or just restock? Will the cost of the restock of the Marine Corps MPS program be funded in the fiscal year 1991 Supplemental?

General WINGLASS. In answer to the first question, reconstitution of the MPS capability is underway in Southwest Asia. We expect each of the 13 ships to be initially reconstituted and redeployed from SWA by the end of November 1991. The utility and feasibility of expanding the MPS program, i.e. adding a fourth MPS squadron, is currently being studied by CNO and CMC at the direction of the Secretary of the Navy. The analysis should be completed at the end of May 1992. We are trying to fund the restocking of MPS with fiscal year 1991 Supplemental. However, it is likely that we will incur some contract and labor costs as part of this effort that will be fiscal year 1992 obligations.

Senator LOTT. General Winglass, under the Defense Management Review and subsequent report, large cuts were made in operation and maintenance (O&M) funding based on "projected savings" from depot consolidations and closures. But the "savings" appear to result almost entirely from less funds available, rather than management decisions generating savings which in turn could allow cuts in funding. This is a classic example of taking credit for cuts disguised as savings. In your opinion, are these consolidations and changes to the depots moving too fast? Are there better ways to proceed in this very delicate build-down of the depot capabilities? Would you rather for the cuts to O&M depot funds be made based on proven savings or would you prefer the cuts, to meet budget targets, drive the resulting structure?

General WINGLASS. In order to achieve the stated savings through competition within the allocated time frames, we need to move very rapidly.

A great deal of effort has gone into the decisionmaking process. Our plan is meant to be a proactive method of achieving savings with the least negative impact in our depot capabilities. Based on the Navy's successful competition experience, the services have chosen this course of action which reflects the best business decisions in the depot maintenance community.

The strategy chosen affords the services the best opportunities to achieve efficiencies while strengthening our future structure. The plan emphasizes the utilization of sound business practices to achieve the desired savings within the depot maintenance arena.

Senator LOTT. General Winglass, a large degree of consolidation and grouping of support, construction, and personnel funding has been made at the DOD level, after the individual services submitted their budgets. These funds have been placed in the Defense Business Operations Fund (DBOF).

When the budget requests are reviewed by Congress, we will examine the funds under both the original and grouped titles. It is not clear at this time how the funds will be authorized and appropriated.

Do you have a preference on how the funds should be reviewed and reported back to your services?

General WINGLASS. The DBOF represents a fundamental change in the way the Department manages its financial business. The establishment of this fund in fiscal year 1992 begins primarily with the consolidation of existing revolving funds and the establishment of the Defense Finance and Accounting service. The Marine Corps role in the initial establishment of the DBOF will be predominantly that of a customer. Of major concern is the need for sufficient funding, regardless of the process, to allow the Marine Corps to procure necessary equipment and services to perform its mission.

Senator LOTT. General Winglass, to meet the ammunition, spare parts, and support needs of the Persian Gulf, the services contributed from their reserves. Have plans been made to ensure your service will eventually be restored with adequate quantities of these supply items to meet command taskings? Will they be funded from the fiscal year 1991 Supplemental or from fiscal years 1992-1993 and outyear budget requests?

General WINGLASS. Efforts are ongoing to assess actual usage in Desert Shield/Storm. Only after units have returned to home stations and in-country stocks have been recovered and retrograded will a complete picture of replenishment requirements be available. Funds provided in the fiscal year 1991 Supplemental for ammunition, spares and other consumable supplies will be applied to the highest priority deficiencies. Should further deficiencies exist, they will be funded through reprogramming, if possible, or through outyear budget requests or Supplementals.

[Whereupon, at 11:35 a.m., the subcommittee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

WEDNESDAY, APRIL 17, 1991

U.S. SENATE,
SUBCOMMITTEE ON READINESS,
SUSTAINABILITY AND SUPPORT,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

LOGISTICS PROGRAMS

The subcommittee met, pursuant to notice, at 2 p.m., in room SR-222, Russell Senate Office Building, Senator Alan Dixon (chairman of the subcommittee) presiding.

Committee members present: Senators Dixon, Levin, Shelby, and Thurmond.

Committee staff members present: Daniel G. Sakura, research assistant.

Professional staff members present: David S. Lyles.

Minority staff members present: Patrick A. Tucker, minority staff director and counsel; Romie L. Brownlee, deputy staff director for the minority; Ronald P. Kelly and George W. Lauffer, professional staff members.

Staff assistants present: Elizabeth Ann Harlow and Mary J. Kampo.

Committee members' assistants present: Kenneth N. Luongo, assistant to Senator Levin; Charles C. Smith, assistant to Senator Dixon; Terence M. Lynch, assistant to Senator Shelby; Samuel D. Adcock, assistant to Senator Lott; Eric H. Thoemmes, assistant to Senator Coats.

OPENING STATEMENT OF SENATOR ALAN DIXON, CHAIRMAN

Senator DIXON. Ladies and gentlemen, the subcommittee meets today to continue our hearings on the fiscal years 1992-1993 Defense authorization request. This is the second of our two hearings with the senior logistics commanders of the military services. Last week we heard from the Navy, the Marine Corps, and the Defense Logistics Agency. Today we are delighted to have with us General William Tuttle, the Commander of the Army Materiel Command and General Charles McDonald, Commander of the Air Force Logistics Command.

Gentlemen, we welcome you to the subcommittee this afternoon. I want to express to both of you my own personal admiration and appreciation for the work of your two commands during Operation Desert Shield and Desert Storm. Both of your commands demonstrated once again that logistics and support are very important to the outcome of combat. Our weapons systems in the Persian Gulf worked well under very extreme environmental conditions, in large part because we invested in the spare parts to support these weapons systems and trained our maintenance personnel to keep them operating. I hope you will pass on the subcommittee's congratulations to all of the men and the women in your commands.

Senator Lott and I asked our witnesses today to outline the scope of their logistics support for Operation Desert Shield and Desert Storm; indicate how the fiscal years 1992-1993 defense budget will affect their capability to meet their wartime logistics support; and discuss the ongoing implementation of the logistics management proposals in the Defense Management Review.

General Tuttle and General McDonald, we appreciate your being here this afternoon. Your full statements, of course, will be included in the record, and we will have questions after you have given your oral testimony.

Do I understand, General McDonald, that your wife is with you today in the audience?

General McDONALD. That is correct, sir.

Senator DIXON. Mrs. McDonald, we are honored to have you here today. Before the witnesses begin, let me say that as members of the subcommittee come in, I certainly expect the ranking member, Senator Lott, and I am sure Senator Thurmond will come in, we will permit them to make some brief remarks.

I might say further, General Tuttle and General McDonald, in about an hour I am going to excuse myself and Senator Levin will accommodate me by chairing at that time. Frankly, we have a major piece of legislation of important parochial interest to my State on the Senate floor, and I will be on the floor doing my job for Illinois. So I hope you will forgive me for leaving promptly at 3 o'clock. But thank you very much for coming.

I would like to insert for the record the opening statement of Senator Lott.

[The prepared statement by Senator Lott follows:]

PREPARED STATEMENT BY SENATOR TRENT LOTT

Thank you Senator Dixon. I too would like to welcome the witnesses to this hearing today on the Department of Defense logistics programs for fiscal years 1992-1993 and Desert Shield/Desert Storm support.

We are all aware the national security requirements of the United States are under major review. Fiscal year 1992 will be the first year of direction and funding for a reduction of the U.S. military forces. This transition should be made with the utmost of care.

The United States enjoyed success in the Desert Shield/Desert Storm operation due to past policies and investments. We are now going to reverse a great deal of these decisions in fiscal year 1992. We should be very careful.

From the witness statements for the record, the current logistics and support organizations were major contributors to the Persian Gulf successes. These organizations will be substantially altered and/or eliminated within the next 2 to 3 years. The wisdom of these changes requires review.

In the justification for the fiscal year 1991 supplemental funding, O&M and support costs were a large part of the approved funding. At this point, it appears unlikely that the supplement funds can be obligated and/or expended by September 30, 1991. Extension of this date should be discussed as soon as possible.

I look forward to the witnesses statements and questions to follow.

Senator DIXON. General Tuttle, would you please begin?

STATEMENT OF GEN. WILLIAM G.T. TUTTLE, JR., USA, COMMANDER, ARMY MATERIEL COMMAND

General TUTTLE. Certainly, sir. Mr. Chairman and distinguished committee members, good afternoon. Thank you for this opportunity to address our continuing and ensured interest in readiness, sustainability and support to our Army. As I reported last year, the quality of the force and our ability to conduct tough realistic training drive Army Materiel Command sustainment tasks. The success of Operation Desert Storm would not have been realized without the solid support of the logistics community.

Today I will address what we are doing to ensure Army requirements are met. I will describe the command support to Operation Desert Shield and Desert Storm, and then relate the effects of the fiscal years 1992-1993 Defense authorization request.

DESERT SHIELD/STORM

Let me begin by providing you with a look at the AMC support to Desert Shield and Desert Storm. During the operations, AMC shipped over 900,000 tons of equipment, supplies, and ammunition to our forces, and helped create a logistics infrastructure in the Persian Gulf region to support our high-technology Army in one of the most severe environments in the world.

Another dimension of our support has been adapting technology to meet new requirements. Much has been said recently about the success of our weapons technology, and I want to provide the committee with some examples of work accomplished by AMC's research development and engineering centers and laboratories which provide American soldiers with the technology to win.

Our Harry Diamond Laboratory in Adelphi, developed the fusing and radar technology which combined with Raytheon's software to create the now famous Patriot anti-tactical missile capability. Our Human Engineering Laboratory at Aberdeen, Maryland, developed an M-1 tank crew sleep restraint system. The Belvoir Research Development Engineering Center at Ft. Belvoir, designed, tested, and fielded a mine clearing rake kit for the combat engineer vehicle all in 4 months. This rake was extremely successful in clearing lanes through the Iraqi mine fields, used by not only our Army but the Egyptians as well.

A critical element of AMC support was provided by contractors, and I cannot say enough about the AMC-industry partnership during this operation. For example, AM General in Michigan set up a 24-hour staff center to provide system technical support for 2.5 and 5 ton trucks. Their efforts resulted in heat reduction in crew compartments, additional cooling enhancements, an improved self-recovery system, and an air cleaner service life extension program, all without charging additional fees. Detroit Diesel in Michigan accelerated delivery on heavy equipment transporter engines, providing more than 250 engines in less than 2 months. They also accelerated delivery of an engine block contract by some 7 months.

Of course our most critical tasks were to sustain our soldiers and their weapons systems in combat operations. AMC Materiel Management Centers processed over 1 million requisitions and wrote or accelerated over 7,000 contracts with our partners in industry. Our depots, arsenals, and ammunition plants shipped more than $12.8 billion worth of materiel, including 679,000 tons of ammunition, worth about $7 billion, to all the services.

AMC was able to maintain a 90 percent plus fill rate for all Operations Desert Shield/Desert Storm requisitions, while our support to other U.S. forces worldwide continued. AMC depots worked around the clock to ensure that as events unfolded in Desert Shield and Desert Storm and units prepared for deployment, Army forces deployed with fully mission capable equipment.

Savanna Army Depot in your home State, a relatively small facility, shipped over 15,000 tons of munitions, including 2,500 rocket pods for the multiple launch rocket system, and several thousand 500 and 750 pound bombs to my colleagues in the Air Force. They accomplished a year's worth of work in about 5 months without adding to the work force.

Red River Army Depot assistance teams at Ft. Hood, worked 24 hours a day and painted nearly 6,000 vehicles in 10 days.

On August 19, 1990, just about 12 days or 17 days after the invasion, AMC established its forward element with 7 personnel in Saudi Arabia. From this modest beginning, AMC Southwest Asia grew to an organization of over 3,000, a third of whom were contractor personnel. This organization served as a primary focal point for AMC support to U.S. forces during Desert Shield and Desert Storm, to include depot level supply and maintenance, test measurement and diagnostic support, and the AMC logistics assistance specialists who worked directly with combat and support units.

AMC also established an aviation logistics infrastructure in Southwest Asia known as the theater aviation maintenance program. As events progressed, this organization grew to over 400 contractor personnel at three locations providing hands-on maintenance and supply support to the 2,000 deployed Army aircraft. By establishing repair capabilities forward to reduce turn around time for critical and expensive components and save transportation costs, AMC was able to contribute significantly to high readiness rates and save millions of dollars in pipeline costs.

An example of logistics expertise is also evident in the efforts of Anniston Army Depot, which deployed over 200 civilian employees to Saudi Arabia in support of the M1A1 tank roll over program. Anniston technicians in theater upgraded tanks to the latest configuration, including applying additional turret modernization, desert tan paint, fire shield and extinguisher modifications. Meanwhile, depot personnel supported deployed units by testing and mating engines and transmissions to provide full up power packs, modifying counter mines systems for deploying units, and serving as members of new equipment training teams to train deploying units.

The American people can be justly proud of the efforts expended by AMC's professional logisticians. Although our Armed Forces' success in Desert Shield and Desert Storm may be viewed by the public as a conclusion of defense efforts in Southwest Asia, the

AMC Desert Shield/Desert Storm mission is far from completed. Your Army must now redeploy in excess of 100,000 major items of equipment from Southwest Asia. We are planning to repair for reissue about 840 M-1 Abrams tanks at Anniston Army Depot, and about 327 M2M3 Bradley Fighting Vehicle systems at Red River Army Depot in Texarkana, Texas. This is a prime example of work that will be done to ensure that our Army is maintained in the future to meet any contingency.

DEFENSE AUTHORIZATION REQUEST

Now let me respond to your request that I address the fiscal years 1992-1993 Defense Authorization Request and the capability of AMC to meet our wartime logistical responsibilities, as well as the Defense Management Review initiatives.

AMC is facing difficult financial and people problems as the Army attempts to reduce the active force structure by over 25 percent in the next 5 years. Between 1990 and 1993, AMC's civilian work force will decline at least at the same rate. The part of the AMC work force——

Senator DIXON. At 25 percent rate? I am not sure I got that.

General TUTTLE. At least at the 25 percent rate, perhaps a larger rate. The part of the AMC work force which performs the work over which this committee has primary interest numbered some 63,000 in early 1990. About 36,400 were engaged in central supply procurement, ammunition supply management, integrated logistics support, and command and control of all AMC's commands and activities. That is the Operation and Maintenance (O&M) program 7S, so-called.

Budget driven reductions and transfers in fiscal year 1991 necessitated drawing them down by 6,500 from the fiscal year 1990 level, a reduction of nearly 18 percent in 1 year, although I will tell you about 35 percent of that was transfers out to other activities. Another 3,000 were taken out of the 26,700 work force which performs depot maintenance and software support to the Army's major weapons systems, as well as providing maintenance engineering throughout the life cycle of the systems, field technical assistance, calibration of field maintenance test equipment, and technical manual writing, a reduction there of about 11 percent of this staff. That is the O&M program 7M.

As anticipated, the fiscal years 1992-1993 authorization request continues to draw down AMC resources along with the remainder of the Army. Modestly drawdown in fiscal year 1992, significantly, we estimate, in fiscal year 1993. We should be able to accomplish the fiscal year 1992 personnel drawdown through attrition. The smaller budget in fiscal year 1993 will result in a significant decrease in available work years, which will present us with a major management challenge to provide the same command and control, planning end item management and logistics support responsiveness to contingencies such as Operations Just Cause and Desert Shield and Desert Storm.

DEPOT MAINTENANCE

Now let me speak to our depot maintenance program. One of the major components of equipping and sustaining our forces is depot maintenance. The depot maintenance budget line for the overhaul and repair of equipment decreased from $1 billion 553 million in fiscal year 1991 to $952 million in fiscal year 1992, and $589 million in fiscal year 1993. However, most of the $600 million changed from 1991 to 1992 is due to the transfer of responsibilities for repair of the Army depot level repairable components to the stock fund. That is to be customer funded, as I am sure you understand. Additionally, though, the remaining reduction is due to force structure drawdown.

The Desert Storm work load and required funding will be addressed by the Department in a supplemental request. However, it is obvious that it will have an impact on depot maintenance resourcing and operations.

Now let me turn to another important part of Program 7M, that is maintenance support activities, to include embedded software, maintenance engineering, technical publications and the technical assistance, like the over 2,000 logistics assistance representatives who we had in Saudi Arabia. Unlike many other areas, these programs are not primarily driven by the size of the Army, nor the force structure, nor the number of items in the field, but are dependent upon the complexity of the equipment, the number of different types of equipment, and the continual modernization of the equipment we must support and sustain. Now as resources decline these programs are being reduced and our backlog of maintenance support activities, especially in updating technical publications, is increasing.

Next I would like to discuss depot maintenance capital equipment and training necessary to repair high-technology equipment. As newer weapons systems exploit the advances in sophisticated electronics and composite materiel, investments must be made in our depots capital equipment, and facilities so we can support our soldiers' weapons. This is especially important for our high-technology systems. We are attacking the challenge by making our depots more efficient. As an example, at the Tooele Army Depot, we are constructing a consolidated maintenance facility. This program will combine the supply, maintenance, and shipping functions required for several types of trucks, trailers, generators, and other equipment into one integrated facility. The facility will replace dozens of old buildings and greatly improve productivity, allowing those at Tooele to absorb about 300 man-years of work load without additional hiring.

As Desert Shield and Desert Storm has demonstrated, the industrial base is a vital component of the Nation's defense. With the necessary limitations placed on military forces and materiel in peace time, the United States must have the ability to rapidly expand production in wartime. That expansion must be planned. The process has been developed over time and continues to evolve.

Currently our thrust is to develop graduated mobilization response options. The options are clear statements of goals and costs which provide the decision makers with flexibility and the ability to control the pace and direction of industrial mobilization. Graduated mobilization plays to America's strength, the ability to innovate and respond on demand.

We are conducting a study of the industrial base and the impact of a transition to lower force levels. Inventories of war reserves to support a smaller force will result in fewer requirements placed on the production base with the potential for halting procurement until stocks are drawn down. At the same time we must maintain a viable production base to produce the next generation of technologically superior weapons and to mobilize.

As part of the Defense Management Review process and Defense Depot Maintenance Council, the Army is developing plans to consolidate depot maintenance work loads aimed at achieving greater economies and efficiencies. These consolidations involve both internal redistribution of work, internal to the Army that is, and increased inter-servicing of items where one service's depot maintenance capacity can be most cost effectively applied to support the needs of the other services. The consolidations that are being considered are targeted to increase the capacity utilization of service depots and eliminate duplicate capabilities in DOD facilities. And within this consolidation initiative, the services will retain the core organic depot maintenance capabilities required to sustain and to mobilize their combat critical weapons and equipment systems.

The distribution of supplies to our soldiers is provided primarily through our two area oriented depots which we have now merged with Defense Logistics Agency defense distribution regions. The Army's program to modernize its area oriented depots with state of the art distribution centers was completed at Sharp Army Depot in March 1989, and at New Cumberland Army Depot in March 1991. And I might add that modernization was, of course, enthusiastically supported by this committee.

The $300 million investment will provide Department of Defense now, not just the Army, with distribution facilities capable of sustaining a high level of support to the modern Army and other services well into the next century. In support of the Defense Management Review initiative, the Army transferred Sharp Army Depot to the Defense Logistics Agency in July 1990, and today, April 17, we have transferred New Cumberland Army Depot to Defense Logistics Agency. The ceremony goes on as we speak.

SUMMARY

Mr. Chairman, in closing I want to thank you and the members of the committee for this opportunity to testify. To sum up, I believe the AMC-industry partnership did a superb job in supporting our Southwest Asia fighting force in Desert Shield and Desert Storm. I cannot speak highly enough of the dedicated AMC work force or industry cooperation for Operation Desert Storm. We must ensure funding remains adequate to support future contingencies and for maintaining the future readiness of our Armed Forces. We must always remember our principal job is to sustain the Army combat mission whenever and wherever it is needed.

I would like to make one final note before closing. The committee should understand that the services' ability to sustain our people and weapons systems in future conflict is being strengthened through the efforts of the joint logistics commanders, General McDonald on my left, and I, along with General Yates in the Air Force Systems Command, Vice Admiral Loftus, the Navy Deputy Chief of Staff for Operations and Logistics, Lt. Gen. Joel Winglass of the Marine Corps, Lt. Gen. Joe McCausland of Defense Logistics Agency make up this group.

For 25 years this joint effort has worked together with increasing effectiveness. We are committed to further improvements similar to those examples I have addressed in my statement for the record. The result will be both a healthier ability to support joint combat forces readiness and sustainment at a lower price to the taxpayer.

I appreciate the opportunity to testify before this committee, and I anticipate your questions.

[The prepared statement of General Tuttle follows:]

PREPARED STATEMENT BY GEN. WILLIAM G.T. TUTTLE, JR., COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND

Mr. Chairman and distinguished committee members. Thank you for this opportunity to address our continuing and shared interest in readiness, sustainability, and support to our Army.

As I reported last year "the quality of the force and our ability to conduct tough, realistic training drive Army Materiel Command's sustainment tasks." The success of Operation Desert Storm may not have been realized without the solid support of the logistics community.

Today I will address what we are doing to ensure Army requirements are met, command support to Operation Desert Shield/Storm, and the effects of the fiscal year 1992/93 Defense authorization request. I will also include an update of the Defense Management Review initiatives affecting the Command.

The Secretary of the Army and the Chief of Staff have previously testified on six imperatives for maintaining an Army which is second to none. Let me restate those imperatives now, before I discuss the AMC's support to U.S. forces in the Central Command, and then expand on that to describe the logistics implications for our future Army.

— Quality—attract and retain high quality soldiers and civilians.

— Doctrine—Maintain forward-looking warfighting doctrine.

— Force Structure—Maintain the force size and mix of heavy, light, and Special Operations units required by national strategy.

— Training—Conduct tough, realistic training.

— Modernization—Modernize continuously to ensure Army forces have needed warfighting capabilities.

— Leader Development—Develop competent, confident leaders.

Let me begin by providing you with a look at the AMC support to Desert Shield/Storm during the initial stages of Operation Desert Shield. Today's Army moved five times faster than the preliminary deployments to Vietnam. Through all phases of Operations Desert Shield/Storm, AMC shipped over 900k tons of equipment, supplies and ammunition. AMC helped create a logistics infrastructure to support our high-technology Army in one of the most severe environments in the world. Even though Desert Storm is drawing to a close, AMC's logistics war is still being successfully waged to support all of our Armed Forces and many allies.

Our success in Operation Desert Storm has validated and brought into focus our responsibility to invest in the logistics support for warfighting. We could not have executed Desert Storm without trained soldiers, ready equipment, and the capability to sustain them in high-tempo operations. Throughout the entire period of the build-up of Desert Shield/Storm, we sustained the readiness of forward deployed forces in Europe and Asia to protect our national interests in those parts of the world, as well as in this hemisphere. Our ability to support all of these forces and our allies receiving security assistance simultaneously, is a tremendous achievement. We, as a Nation, must plan responsibly now, to provide the winning logistics capability for tomorrow's smaller, more lethal, versatile Army—an Army with a strategic focus. Today I will highlight what we are doing to meet the Army's future logistics requirements, but before I do, I want to provide the committee with some insight into AMC's contributions to Operation Desert Storm.

Operations Desert Shield/Storm presented unique challenges, unprecedented in the history of our Army, and for AMC in particular. The deployment of thousands of soldiers and associated materiel to an undeveloped theater of operations, nearly devoid of an operating base, tested our logistics sustaining capability and the materiel acquisition process as well. The successful prosecution of this operation could not have been accomplished without the professional efforts of thousands of people who make up the AMC community: military, civilian and contractors throughout the country.

Much has been said recently about the success of our weapons technology. I want to provide the committee with information on AMC's contributions with some examples of work accomplished by AMC's research, development, and engineering centers and laboratories, which provide American soldiers with the technology to win.

—Our Harry Diamond Laboratory developed the fusing and radar technology which combined with Raytheon's software to create the now famous Patriot anti-tactical missile capability.

—Within weeks, our human engineering laboratory developed an M1 tank crew sleep restraint system. This application of fire retardant kevlar materiel provided a safe and secure sleeping capability for two crewmen inside the tank, which increased our ability to sustain operations.

—The helicopter terrain avoidance system was developed by our Communications and Electronics Command's Center for night vision and electro-optics specifically for Desert Storm. This system adapts M-16 rifle infrared aiming lights for use on helicopters. The system gives night vision goggle-equipped air crews enhanced warning of potential impact with the ground in essentially "featureless" desert terrain.

—Our countermine technology was enhanced by the Belvoir Research, Development, and Engineering Center's work to design, test, and field a mine clearing rake kit for the combat engineer vehicle in less than 100 days. This rake was extremely successful in clearing lanes through Iraqi mine fields.

Additionally, our Field Assistance in Science and Technology (FAST) program established a critical link between our labs and research centers and the Army component commander in CENTCOM. Selected scientists and engineers made frequent trips to Saudi Arabia to determine technology needs and provide materiel solutions within 30 to 60 days after the requirement was identified. Seemingly small things provided big results. Some examples are: M-16 rifle zip-lock protective dust covers, which provided protection against the sand environment and thus increased the time interval between cleanings; solar loading protective materiel, which reduced the effects of intense, long-term exposure to solar heating for personnel and equipment; and long range observation devices, which provided Special Operations units with the capability for long range observation over the flat desert terrain. These teams also provided training for our soldiers to install and operate this materiel which was accelerated from development for deployment in Saudi Arabia.

We reviewed hundreds of proposals from our labs and research centers and private industry to exploit technology and provide our soldiers with the advantage in weapons, optics, food, shelter and clothing.

You are well aware of successes of the Army's major weapons systems fielded in the 1980s: Apache, Patriot, M1A1, Bradley Fighting Vehicle, Multiple Launch Rocket System, to name only a few. Equally successful and invaluable, though less advertised: Reverse Osmosis Water Purification Unit (ROWPU); heavy expanded mobility cargo and fuel trucks, and a number of modern munitions. Given the extreme challenges of operating in the Saudi Arabian desert, we augmented our forces with additional equipment and rushed into the field through a coordinated effort between AMC and industry.

We instituted a process to mobilize our industrial base at the onset of Desert Shield. Critical equipment shortages were identified by commanders in the field, the AMC community and/or program managers. Requirements were validated, systems approved for surge production, funds allocated and contracts executed—all in record time.

Logistics materiel surges encompassed items such as: aviation maintenance "clam shell" shelters essential to repair and maintain aircraft and aircraft components in the harsh desert environment; water purification, storage and distribution systems; petroleum storage and transportation equipment; and chemical defense equipment. Soldier system support equipment was procured in record quantities for Army, Air Force and Marine Corps forces. These items included the desert battle dress uniform (DBU), the now famous Schwarzkopf desert boots, ballistic laser protective spectacles (BLPS), and flameless ration heaters.

A number of our major weapon systems showed great improvement during Operations Desert Shield/Storm. Two front line systems, the Apache helicopter and the M1A1 Abrams tank, were consistently maintained at over 90 percent. Much credit must be given to our soldiers—the best trained, most highly educated and professionally dedicated in the history of the Army. Stories abound reflecting their ingenuity in devising ways to improve the operational readiness of their weapon systems. In addition to these efforts to improve readiness, there was a total effort which relied on repair parts availability, depot repair, contractor support teams, and the dedicated professionalism of the AMC military and civilian logistics support personnel, both in CONUS and in Saudi Arabia. What follows is a synopsis which demonstrates the magnitude of this effort.

Here are a few examples of the superb support provided by contractors in support of Desert Shield/Storm:

— AM General, Michigan, set-up a 24-hour staff center to provide system technical support for 2½ and 5 ton trucks. Their efforts resulted in heat reduction in crew compartments, additional cooling enhancements, an improved self-recovery system, and an air cleaner service-life extension program, all without charging additional fees.

—Martin Marietta Corporation, Florida, a major subcontractor to Raytheon Corporation in the manufacture of Patriot missiles, accelerated their delivery to meet Army requirements.

—Hilton Systems, Alabama, supported deployment of the Patriot command post automation system through Patriot utilization training and maintenance of software and hardware. This effort involved contractor personnel deployed in Germany, Saudi Arabia, and Israel. Another local company, International Safety of Huntsville, manufactured enough safety glasses and shields to provide delivery within 1-2 working days of receipt of orders issued by Stinger contracts.

— ICI Americas Incorporated, Indiana, in a joint project with Indiana Army Ammunition Plant, shipped over 250k large caliber artillery propelling charges. Despite short-fused transportation 'requests, the contractor met every required delivery date, filling 80 railcars and almost as many trailers and milvan containers, by redistributing personnel and working overtime.

— Detroit Diesel, Michigan, accelerated delivery on heavy equipment transporter (HET) engines providing more than 250 engines in less than 2 months. They also accelerated delivery on an engine block contract by 7 months.

In addition to the acquisition of new materiel, AMC's principal mission is to help sustain our soldiers and their weapon systems in combat operations. AMC processed over 1m requisitions, wrote or accelerated over 7,000 contracts with our partners in industry, and shipped more than $12.8B dollars worth of materiel including 679k tons of ammunition to all services worth nearly $7B. Despite the intense supply system pressure, AMC was able to maintain a 90 percent plus fill rate of all Operation Desert Shield/Storm requisitions while our support to other U.S. forces worldwide continued.

Additionally, Reserve component personnel have rendered invaluable support to Operations Desert Shield/Storm, both in CONUS and overseas. Over 1,780 Reserve component personnel were called to Active duty and provided support to AMC in CONUS and SWA. This includes individual mobilization augmentees (IMAS), other individual Reservists, and over 1,300 members of six Reserve component units who provided logistical, supply, and maintenance support at three depots in the United States and in Southwest Asia.

Ground force commanders are vitally concerned with the availability of their major weapon systems. The depots of our Depot Systems Command (DESCOM) worked around the clock to ensure that as events unfolded in Desert Shield and units prepared for deployment, Army forces deployed with fully mission capable equipment.

Savanna Army Depot activity, a relatively small facility, shipped 15.5k short tons of ammunition and over 260 short tons of 140 different line items of supply. This workload normally spread over more than a year was accomplished in 3 months using only personnel on board working overtime. The shipments included 2,500 rocket pods for the multiple launch rocket system (MLRS) and several thousand 500 and 750 pound air-to-surface bombs for the Air Force, both essential to ground and air operations.

Red River Army Depot (RRAD) in Texas was particularly heavily involved in supporting heavy units which were alerted for deployment to Southwest Asia (24th Mechanized Infantry Division, 1st Cavalry Division, 3rd Armored Calvary Regiment, 197th Separate Infantry Brigade, and the 1st Infantry Division.)

— Red River assistance teams at Fort Hood working 24 hours a day for 10 days, painted 6,000 items.

— Maintenance assistance teams were sent to all deploying units to help inspect and repair equipment.

— A warehouse of assembled packages of repair parts by aircraft type, was established by RRAD. These critical aviation components were then shipped to forward storage sites in SWA to facilitate in-theater maintenance operations set up by Aviation Systems Command (AVSCOM).

AMC established an aviation logistics infrastructure in SWA, known as the Theater Aviation Maintenance Program (TAMP). As events progressed, this organization grew to over 400 contractor personnel at three locations—providing hands-on maintenance and supply support to the 2,000 deployed Army aircraft. By establishing repair capabilities forward to reduce turn-around time for critical and expensive components and save transportation costs, AVSCOM was able to contribute significantly to high readiness rates and save millions in pipeline costs.

On August 19, 1990, AMC established its forward element with seven personnel in Saudi Arabia. From this modest beginning, AMC-SWA grew to an organization of over 3,000, a third of whom were contractor personnel.

This organization served as the primary focal point for AMC support to U. S. forces during Desert Shield/Storm. To accomplish this vital support mission, three major AMC elements deployed personnel and equipment to the theater. First, the Army support group, a component of AMC's Depot Systems Command (DESCOM), brought depot level supply and maintenance skills and trades to the theater. Second, the Test, Measurement, and Diagnostic Equipment (TMDE) support units calibrated and repaired critical pieces of test equipment used in support of weapons systems. Third, the AMC logistics assistance program with its logistics assistance representatives (LARS), highly trained and technically specialized civilians and military logisticians, served as the catalyst to integrate the total logistics support program.

Located with the major combat units such as the 1st Cavalry Division, 82nd Airborne Division, and the 101st Airborne Division, the LARS represented all of AMC's commodity commands. the LARS provided vital logistics intelligence feedback on problems encountered with weapon systems, possible solutions, and critical repair parts requirements as they occurred. This is logistics intelligence at its best; it allowed AMC to provide support to the force and to fix problems before they could "snowball" into war stoppers. The logistics intelligence feed-back process allowed AMC to provide rapid fixes to rotor blade erosion, engine degradation, bearing failures, and aircraft survivability equipment, all a result of the extreme environmental conditions.

An example of logistics expertise is also evident in the efforts of Anniston Army Depot, which deployed over 200 civilian employees to SWA in support of the M1A1 tank rollover program. Anniston technicians in theater upgraded tanks to the latest configuration, including applying additional turret modernization, desert tan paint, and fire shield and extinguisher modifications. Meanwhile, depot personnel supported deployed units by testing and mating engines and transmissions to provide full-up power packs, modifying countermine systems to deploying units, and serving as members of a new equipment training (NET) team to train deploying units.

Let me pause here to say a few words about the debt we owe to our dedicated civilian personnel. In total, over 1,100 AMC civilians deployed to Southwest Asia in support of Desert Shield/Storm beginning August 2, 1990, and did what the Army required them to do—supply and maintenance support, support of high tech equipment, and support of combat units. Although the Arabian Peninsula was designated a combat zone effective January 17, 1991, danger pay for civilians was not authorized until January 24, 1991, and is not retroactive. Prior to February 24, 1991 civilian employees also did not receive foreign post differential pay until their 43rd day in SWA. While the State Department modified the regulation on February 24, 1991, it could not authorize the additional pay retroactively before that date. AMC civilian personnel have done an outstanding job in support of Desert Shield/Storm and deserve our support in return. This support was accomplished under adverse circumstances. The American people can be justly proud of the efforts expended by the Army's professional logisticians.

Although our success in Desert Shield/Storm may be viewed by the public as the conclusion of defense efforts in SWA, the AMC Desert Shield/Storm mission is far from completed. We in the logistic community are faced with an equally challenging task to repair/overhaul equipment/vehicles that are returned to CONUS. Much of this equipment (M1) will go into our National Guard and Reserve divisions.

The Army must now redeploy in excess of 100K major items of equipment from SWA. We are planning to repair for reissue 840 M1 Abrams tanks at Anniston Army Depot (ANAD) and 327 M2/M3 Bradley fighting vehicle systems at RRAD located at Taxarkana, TX. This is a prime example of the work that will be done to ensure that our Army is maintained to meet any contingency. We are also faced with retrograding tons of supplies and support equipment and, upon receipt in our CONUS depots, to preserve those supplies for future requirements.

Now let me respond to your request that I address the fiscal year 1992/93 Defense authorization request, and the capability of AMC to meet wartime logistical requirements and the Defense management review initiatives.

As I stated last year, AMC's first and primary mission is to equip and sustain a trained ready Army. The challenge we face is to sustain our capability to perform this critical mission as force structure and resources decline.

AMC is facing difficult financial and people problems as the Army attempts to reduce the Active force structure by over 25 percent in the next 5 years. Between 1990 and 1993 AMC's civilian workforce will decline at least at the same rate.

The part of the AMC workforce which performs the work over which this committee has primary interest numbered some 63,000 in early 1990. About 36,400 were engaged in central supply, procurement, ammunition supply management, integrated logistics support, and the command and control of all AMC's commands and activities (OMA; program 7S). Budget reductions and transfers in fiscal year 1991 necessitated drawing them down by 6,500 from the fiscal year 1990 level—a reduction of nearly 18 percent in 1 year. Another 3,000 were taken out of the 26,700 workforce which performs depot maintenance and software maintenance support to the Army's major weapons systems as well as providing maintenance engineering throughout the life cycle of the systems, field technical assistance, calibration of field maintenance test equipment and technical manual writing—a reduction of about 11 percent of this staff (OMA, program 7M).

In the end, only a little over 2 percent of the people were involuntarily released but the resulting turbulence reached over 14,000 people; nearly 26 percent of our operations and maintenance funded workforce, because of job bumping and down grading. All of this was taking place as Operation Desert Shield began. Many of you have heard the stories of a patriotic workforce who responded to the operation desk shield emergency, working 7 days a week with pink slips in their pockets. We made it through Operation Desert Shield and Operation Desert Storm by retaining nearly 2,000 of the people slated for reduction and hiring nearly 6,000 temporary employees and now, given the major budget drawdown we are seeing, we expect to build a capability to meet fluctuating workloads increasingly with temporary workers.

As anticipated, the fiscal year 1992/93 authorization request continues to drawdown the AMC civilian workforce. From the average 1990 civilian workforce of 63,000 in P7S and P7M, we estimate a significant reduction in fiscal year 1993. A reduction of approximately 3,000 will result from the 1988 base closure and DMRD realignment actions. The fiscal year 1992 supply and maintenance workload, including Desert Storm, can be accomplished within the budget. We will be able to accomplish the fiscal year 1992 personnel drawdown through attrition.

The smaller workforce in fiscal year 1993 will result in a significant decrease in available workyears which will present us with a major management challenge to provide the same command and control, planning, end item management and logistics support responsiveness to contingencies such as Operation Just Cause and Operations Desert Shield/Storm.

These reductions further impact opportunities for achieving productivity improvements—one of our most important being through the use of automation. We are keenly sensitive and supportive of the DOD logistics interim standard system (LISS) initiative, and we are working diligently with DOD and the military services to achieve automation standardization.

We are continuing to seek opportunities to reduce our operating cost and overhead at our 91 installations. To off-set these reductions we continue to support the DMRD initiatives such as consolidating integrated materiel management centers.

Now let me discuss the overall Army ammunition budget. The Army ammunition procurement budget is $1,249.8M in fiscal year 1992 and $1,195.4M in fiscal year 1993. A breakout of the budget request includes $1,048.5M fiscal year 1992 and $999.2M in fiscal year 1993 for ammunition end items with the remaining dollars supporting the Army's production base. This request reflects the Army's priorities and the best balance between risk and available funds. Thirty to thirty-five percent of training requirements will be met by drawing down war reserve stocks, primarily older types of ammunition. Eleven modern ammunition war reserve items are being procured. As ammunition expenditure rates for Southwest Asia are evaluated, decisions made in fiscal year 1991 will need to be adjusted. The impact this will have on future ammunition requirements is yet unknown. As a result of Desert Storm, Congress appropriated $15B to capitalize the Persian Gulf regional fund and provided the Department with authority to transfer $509.6M from the Persian Gulf regional defense fund and the Defense cooperative account to meet Desert Shield/Storm related ammunition requirements.

The peacetime ammunition end item acquisition supports training requirements and provides modest increases to the war reserve stockpile for the 11 modernization items. Support of war reserve requirements accounts for approximately 60 percent of the fiscal year 1992 and 52 percent of fiscal year 1993 end item procurement funding request.

As the defense budget, and especially the ammunition appropriation, declines, our defense ammunition industrial base will continue to shrink. Fewer government-owned plants will remain active and inactivation of ammunition facilities will proceed, for the most part, as scheduled. With the future ammunition base getting smaller, our supporting ammunition producers face very tough near-term challenges. We must maintain an adequate ammunition production base to meet wartime requirements. Therefore, it will be more important than ever that government and industry jointly strive to maintain production capability for high priority munitions. We must continue to develop means to identify key requirements, core production facilities with flexible production lines, and implement innovative management principles for consolidating and preserving the Army's production capability. Our challenge is to down size the base without compromising fundamental capabilities—all within the framework of constrained financial resources. Production base support funding of $201.3M in fiscal year 1992 and $196.2M in fiscal year 1993 is expected to maintain both the active and inactive base; correct environmental deficiencies; lay-away production lines no longer required during peacetime and demilitarize munitions considered hazardous, obsolete and uneconomically repairable.

The measure of a successful program is feasibility of execution. With the support we've received in recent years we believe we have established the right priorities and proper mix of ammunition to fight and sustain a major contingency. Our contribution to Desert Shield/Storm validated this belief. As operational strategists assessed the changes and adjusted to meet the Iraq threat, the demand for a sufficient supply of various types of munitions became a challenge. This challenge was met by accelerating production at various ammunition production facilities, to ensure our forces had the ammunition required to meet the threat. We provided approximately 679k short tons of ammunition to all services in Southwest Asia.

Another challenge is the disposition of the CONUS demilitarization stockpile which is presently 205k short tons and projected to increase approximately 23k short tons each year. We are funded to eliminate 43k short tons in fiscal year 1991, 27.7k short tons in fiscal year 1992 and 21k short tons in fiscal year 1993. Starting in fiscal year 1992, funding for demilitarization will be transferred from Army, OMA to Army, PAA. This should enhance our ability to gain effective management control of this growing stockpile, and provide stability to the program funding.

Now let me provide you with an assessment of your Army's current materiel readiness. We continuously monitor mission capable rates, as well as other key indicators, for 410 weapons systems and other equipment. This translates to over 407,000 individual items. We monitor these items to isolate and correct equipment problems which adversely impact materiel readiness. The fiscal year 1990 total Army readiness rate reached a high of 91.3 percent, a slight increase caused by the large build-up anticipating hostilities in SWA. Another gauge of our performance is stock availability. This measurement represents the percent of customer request we were able to fill from on-hand stocks. For the past 4 fiscal years AMC has achieved high rates of overall stock availability, meeting the 85 percent performance level. We forecast this level based on the essentiality of the part to the weapon system and the system to the combat force structure. This technique allows the Army to provide a greater level of availability for the critical warfighting systems while remaining within an overall funded performance level of 85 percent. However, due to the unprogramed nature and magnitude of Operation Desert Shield deployments and Desert Storm operations, wholesale inventories have been temporarily drawn down resulting in a reduction in stock availability for several major weapon systems; our intensive management actions continue to recover assets that were shipped to Southwest Asia but are now available for redistribution due to the rapid success of Operation Desert Storm. These actions will result in a quick recovery in stock availability and assure the highest level of support for a trained Ready Army.

Now let me discuss the Central Supply program. A large portion of the Central Supply program is for the support of secondary item management. Effective in fiscal year 1991 all effort related to secondary item management is funded by the Army Stock Fund (ASF). Supply Depot Operations funds the receipt and issue of materiel physical inventory, rewarehousing, and care of supplies in storage (COSIS). As of fiscal year 1991 funding for the salaries of all personnel performing logistics operations in support of secondary items must be earned from Army stock fund sales to retail customers. Accordingly, we are updating our forecasted workload in concert with evolving post Desert Shield/Storm force redeployment, demobilization and reshape planning.

The distribution of supplies to our soldiers is provided primarily through our area oriented depots which we have now merged with the Defense Logistics Agency's (DLA) Defense Distribution Regions (DDR). The Army's program to modernize its area oriented depots with state-of-the-art distribution centers was completed at Sharpe Army Depot in March 1989 and at New Cumberland Army Depot in March 1991. The $300M investment will provide DOD with distribution facilities capable of sustaining a high level of support to the modern Army and the other services well into the next century. In support of the Defense Management Review Initiative the Army transferred Sharpe Army Depot to the DLA DDR-West in July 1990 and today (April 17, 1991) we have transferred New Cumberland Army Depot to the DLA DDR-East.

The Army supports transfer to DLA of the wholesale distribution mission performed by the area oriented depots (AODS). We have already transferred 90 percent of the wholesale supply mission. We are now working with DLA, examining the feasibility, economics and readiness implications on a site-by-site basis of transferring the wholesale supply mission at our multi-mission maintenance and ammunition depots to DLA.

Our success in supporting the soldier is also reflected in our reutilization of previously issued assets. Our European redistribution facilities (ERF) continued to be a great success in redistribution of theater assets. In the last 4 years we have redistributed over $1B worth of materiel to in-theater units and maintenance activities. This includes over $400M in the last year alone and over $18M worth to SWA. Acting as a retrograde processing facility, the ERF sites have been most valuable in expediting and managing the return of unserviceable depot level reparables. Over $535M worth of depot level reparables have been returned to CONUS source of repair through first quarter fiscal year 1991. A similar redistribution facility has been established in SWA to gather and expedite the return of repair parts for worldwide reutilization. This facility will play a major role in supporting the Army's redeployment, demobilization and reshape actions as we withdraw the Operation Desert Storm force structure.

Another program, the Army Materiel Returns program (MAP) is designed to improve supply discipline and stewardship of assets by recovering unserviceable retrograde for induction into depot maintenance repair, and redistribution. In fiscal year 1990 through first quarter fiscal year 1991 $6.1B for depot level reparables and excess redistributable assets were returned/redistributed under the MAP.

AMC continues to take aggressive action to drawdown our spare and repair parts inventories, consistent with the planned force structure reductions. This process continued even during the build up in support of Operation Desert Storm. We can expect to see increases to our inventory levels due to the short duration of hostilities in Southwest Asia. We are reviewing all of our Operations Desert Shield/Storm spare and repair part buys and are adjusting and cutting back where possible and where it makes economical sense.

One of our most significant challenges is to more efficiently manage our inventory while maintaining effective support and sustainment. Our first objective is to reduce the total Army inventory to the minimum level necessary to meet support and sustainment goals. We have taken a number of actions, both in the field and in AMC to achieve this objective. One of our most promising initiatives is the objective supply capability (OSC). This system provides greater visibility of supplies and more field confidence in the logistics system, allowing us to reduce retail stockage levels.

In addition to the efficiencies gained at retail, we are aggressively pursuing the reduction of wholesale inventories. As part of the DOD inventory reduction program, AMC has undertaken management initiatives to reduce secondary item inventories which had been increased during the 1980's as older weapons systems were displaced by force modernization systems. By eliminating numeric retention and by tightening the criteria for the retention of materiel for contingencies, we have significantly reduced the amount of materiel retained for these displaced systems. Between September 1989 and December 1990 we have reduced our on-hand inventory held in authorized retention levels by 43 percent, from $4.1B to $2.3B. Our ability to effect the final disposition of on-hand inventories in excess of these retention levels is paced by the need to screen these assets for potential requirements for all government agencies and security assistance customers. In September 1989 we had $544M in inventory undergoing this screen process and as of December 1990 this had increased to $1.9B.

Our second objective is to dispose of materiel above the retention levels and upon the completion of the screening process. Since 1989 we have made significant progress in reducing the amount of unserviceable and inactive inventory that had been accumulating in our depots since the early 1980s. Contributing to this buildup were the conservative retention policies developed after the "disposal freeze" in 1985-86. In addition these stocks had begun to cause serious overcrowding, adversely impacting depot operations. In an effort to relieve the depots of overcrowding conditions, consistent with existing retention policies, AMC took aggressive action to dispose of inactive inventory as part of the DOD inventory reduction program. In fiscal year 1989, we disposed of $446M worth of materiel. In fiscal year 1990 and first quarter fiscal year 1991 disposals (including end items) were more than doubled to $924.5M. Disposal actions in fiscal year 1991 have been limited so far as a result of uncertain requirements in mobilizing the force for Operations Desert Shield/Storm and subsequent Department of Army deferral of outmoded equipment disposal, plus the major workload in NICP and depots in support of Southwest Asia. By fiscal year 1992 our disposal rates will increase to pre-Operations Desert Shield/Storm levels.

The challenge to effectively and efficiently manage our inventory is heightened by the downsizing and inactivation of Army units and retrograde of materiel from SWA. The Department of the Army is emphasizing redistribution of systems, equipment and supplies to units with outdated systems or shortages. Second priority is fill of our POMCUS, war reserve, other service requirements and security assistance prior to initiating any actions to dispose of excess assets.

As I discussed earlier, a new management concept called unit cost resourcing will dramatically alter the way we do business in the management of end items, munitions, and secondary items. We will receive our program guidance in terms of cost per unit of output. We are already operating under this program for the management of secondary items in the stock fund in fiscal year 1991. Essentially, we get a goal of dollar of cost per dollar of sales and must "earn" our program by selling our inventory to retail customers. For this first time, the item managers have all of the resources for their program in a single management account and are responsible for the delivery of the product to the customer in the most efficient manner. When combined with the previous Defense Management Review Initiatives to have the customer pay for both the depot level reparables and the wholesale logistics support of secondary items, it should provide a management tool to imbed productivity in our operation and pass lower prices on to the customer. This concept will be extended to end item and munitions management in fiscal year 1992. This stock funding or unit costs resourcing technique should reduce the requirements for appropriated funds.

Now let me turn to our depot maintenance program. One of the major components of equipping and sustaining our forces is depot maintenance as demonstrated during Desert Shield/Storm. Our depot maintenance funding for the overhaul, repair and renovation of equipment decreased from $1,553.3M in fiscal year 1991 to $952.6M in fiscal year 1992 and $589M in fiscal year 1993. The primary reduction from fiscal year 1991 to fiscal year 1992 is due to the transfer of responsibilities for repair of Army DLR's to the stockfund effective July 1991 ($651.8M). Additionally, further reduction is due to force structure drawdown. With inflation taken into consideration, these reductions represent a real programmatic decline. while our fiscal year 1992 financial backlog is reduced to $48M, in fiscal year 1993 the backlog will increase significantly to $302M. The Desert Storm workload and required funding will be addressed by the Department in supplemental requests; however, it is obvious that it will have an impact on the depot maintenance resourcing and operations. When additional funds are provided to support this significant mission, it should allow a "smoothing" of the program RAMP in this budget.

Equally important to the depot maintenance process is obtaining the capital equipment and training necessary to repair equipment which requires state-of-the-art technology. As newer weapon systems exploit the advances in sophisticated electronics and composite materiels, investments must be made in our depot's capital equipment and facilities so we can support our soldier's weapons. This is especially important for our high technology systems. We are attacking the challenge by making our depots more efficient. At Tooele Army Depot we are constructing a consolidated maintenance facility. This program will combine the supply, maintenance, and shipping functions required for several types of trucks, trailers, generators and other equipment into one integrated facility. This facility will replace dozens of old buildings and greatly improve productivity and save over 300 people. We are also increasing productivity in our depots through the use a 10-hour 4-day work week. This saves us 20 percent on our daily start-up cost and gives us the ability to quickly expand our capacity to 50 to 60 hour weeks by going to a 5 or 6 day work week.

As part of the Defense Management Review process, the Army is developing plans to consolidate depot maintenance workloads maimed at achieving greater economies and efficiencies. These consolidations involve both internal redistribution of work and increased interservicing of items where one service's depot maintenance capacity can be most cost effectively applied to support the needs of the other services. The consolidations that are being considered are targeted to increase the capacity utilization of service depots and eliminate duplicate capabilities in DOD facilities. Within this consolidation initiative the services will retain the core organic depot maintenance capabilities required to sustain and to mobilize their combat critical weapons/equipment systems. This includes the kind of core capability needed for deployment in support of contingency forces operations such as that recently demonstrated by the Army's depots in support of Desert Shield/Storm. Where workload exists above our essential core depot maintenance capability needs we will also compete that workload between the service depots and private industry to incentivise and attain increased cost efficiencies for the Army. In fiscal year 1991 we will compete one program from each of the Army's maintenance depots and we anticipate that most of that workload will be competitively awarded by September 30, 1991. The Army fully supports this DMR initiative which serves to sustain our core depot maintenance capability requirement.

Realignment of depots and ammo plants will provide economies of scale from the consolidations. Flexible manufacturing at depots and arsenals backed with computer assisted design/computer assisted manufacturing (CAD/CAM) networks is already producing favorable results. Rock Island Arsenal is presently utilizing CAD/CAM in an ever increasing role to directly support manufacturing and production of various weapons systems and spare parts. CAD/CAM operations provide capabilities of vital significance in keeping the M119 lightweight howitzer program on schedule, and has the potential for significant savings. The arsenal is also entering into an agreement with the National Institute of Standards and Technology to participate in a national test which will be the basis for electronic data transmission in the Army computer-aided acquisition and logistics system (ACALS).

CAD/CAM will also allow AMC to manufacture and/or fabricate parts which cannot be obtained from industry such as the night vision adaptors for the squad automatic weapon (SAW). Anniston Army Depot was requested to fabricate these adaptors because contractors could not meet the tight delivery schedule. A key factor to Anniston's quick response was extensive use of their application CAD/CAM system to design, program, and produce numerically controlled tapes for not only the saw parts, but also the tooling and dies to produce the parts. Other than stamping out the sheet metal blanks and minimal welding, all parts were supported by the CAD/CAM system. In total, Anniston fabricated 14,000 brackets which were forwarded to field units for installation on the saw.

As we downsize the Army, we must rely on computer technology to assist field commanders in forecasting enemy intentions, locating targets and controlling weapons. This same technology allows our commanders to rapidly share information over great distances and exercise control over dispersed forces on the battlefield with the use of embedded software. Our equipment is only as effective as the software that controls it. When changes to equipment affect software, the software must be changed to obtain maximum operational capability in order to have a ready force, equipment and software must be ready.

Now let me turn to one of the most important depot maintenance activities, that is maintaining and upgrading embedded software which is a critical weapon systems function also funded in P7M. It allows us to maintain and improve the effectiveness of our weapon systems, many of which contributed to the success of Operation Desert Storm; e.g., Patriot, Apache, and M1 tank. Currently we provide post deployment software support for over 300 systems. These requirements continue to grow as technology evolves, thus making it difficult to maintain as resources decline.

I will now discuss maintenance engineering support and technical assistance to the field. Our maintenance support activities focus on support to the Army. It does this through a number of programs all with the objective of maximizing readiness and our ability to sustain the Army. Unlike many other areas, this program is not primarily driven by the size of the Army, the force structure, or number of items in the field—but is dependent on the complexity of the equipment, the number of different types of equipment, and the continual modernization of the equipment we must support and sustain.

Again as resources decline, this program is being reduced and our backlog of maintenance support activities is increasing.

Technical publications provide the detailed instructions to operate and maintain the Army's materiel. As the complexity of our equipment increases, so does the importance of publications to readiness. The magnitude of this area is overwhelming. We have over 27,000 equipment publications and added almost 700 new ones in fiscal year 1990 alone. This equates to over 3.4M pages to be maintained. Last year we revised or added over 318,000 pages for these publications. The changes made affected less than 9 percent of our total library and we estimate that our backlog is well in excess of 750,000 pages that need changing.

Post production engineering is another critical area in sustaining our weapons systems. This area is not glamorous, and does not have an immediate impact on readiness, but can significantly impact readiness in years to come. Post production engineering focuses on maintaining technical data packages. This is critical if we are to be able to develop alternate sources of supply, improve our products, and most importantly—provide support to our customer, the soldier. This shortfall has resulted in a backlog of 14,000 technical data packages and 3,000 engineering change proposals.

Sample data collection (SDA) is one of the vehicles AMC uses to gather detailed maintenance and logistic data from the field. This data provides the basis for maintenance and logistic data from the field. This data provides the basis for maintenance and operating procedures, product improvements, enhanced training, and lessons learned for future developments and procurements. Likewise, another significant source of information from the field is through the equipment improvement record and quality deficiency reports (EIRS/QDRS). These programs provide an easy and direct way for the soldier to alert us to possible logistics problems. We have placed severe restrictions on data collection in these areas because of declining resources.

This is an area that warrants our attention. From our perspective, funding for maintenance support activities is an investment in the readiness of tomorrow's Army.

Now I will briefly discuss the mobilization industrial base. The industrial base is a vital component of the Nation's defense. With the necessary limitations placed on military forces and materiel in peacetime, the United States must have the ability to rapidly expand production in wartime.

That expansion must be planned. The process has been developed over time and continues to evolve. Currently, the thrust is to develop graduated mobilization response options. The options are clear statements of goals and costs which provide the decisionmakers with flexibility and the ability to control the pace and direction of industrial mobilization. Graduated mobilization plays to America's strength, the ability to innovate and respond on demand.

We are also conducting a study of the industrial base, and the impact of a transition to lower force levels. Inventories of war reserves to support a smaller force will result in fewer requirements placed on the sustaining base with the potential for halting procurement until stocks are drawn down. At the same time, we must maintain a viable production base to produce the next generation of technologically superior weapons and to mobilize. We must guard against unrealistic assumptions.

The study will assess the ability of the industrial base to support Operation Desert Storm and a variety of future operations based upon standard scenarios with the forces planned for fiscal year 1999. The objective of the study is to identify critical industrial capabilities to meet future demands and to develop a methodology for balancing procurement, war reserves and industrial base capacity. We expect this study to be complete in late fiscal year 1991.

Now as you requested, I will discuss military construction. We are in the process of transferring wholesale supply storage and distribution facilities and functions to the Defense Logistics Agency (DLA). Maintenance functions are being realigned consistent with actions already approved under Public Law 100–526, and further actions are being considered. Action to realign laboratories and RDTE facilities under Public Law 100–526 are also proceeding, with further proposals being considered for presentation to the Base Realignment and Closure Commission.

Our ongoing facilities operations continue emphasis on maximizing the effect we can attain from available resources. In fiscal year 1991, we were provided $145M or 22 percent of the military construction, Army (MAC) appropriation. The bulk of these resources, $76.3M or 53 percent were earmarked for chemical demilitarization facilities at Anniston and Tooele Army Depots. With the remainder, we were able to make major investments: a $33M toxicology research facility and $10.4M large caliber weapons and munitions test firing chambers at Aberdeen Proving Grounds, MD; a $14.4M Directed Energy Weapons Laboratory at Redstone Arsenal, AL; a $6.8M satellite communications equipment maintenance facility at Tobyhanna Army Depot, PA; and three smaller projects. We continue to have a backlog of high-priority requirements.

The fiscal year 1992 MCA program supports 18 AMC projects totaling $229.8M or 32 percent of the Army program of $715.5M. Again, the bulk of these resources, $132.4M or 58 percent are earmarked for chemical demilitarization projects at Anniston, Umatilla, Pueblo and Tooele Army Depots. Of the remaining $97.4M, $67.6M provides the hub of a modern missile logistics operations facility at Redstone Arsenal, AL, with the remaining $29.8M apportioned to 11 small projects at nine other installations. An additional five projects costing $18.87M at four locations are also proposed for resourcing.

The fiscal year 1993 construction program presented in the budget provides AMC $197.8M or 70 percent of the MCA construction total of $280.7M. This provides funding for chemical demilitarization projects at Pine Bluff Arsenal, AR, and Umatilla Depot Activity, OR; and a hazardous landfill also at Pine Bluff Arsenal.

Now let me discuss another area of military construction real property maintenance activities (RPMA). Resource levels for RPMA—the operation and maintenance of our physical plant—provide only for our highest priority critical issues. We continue to commit resources to maximize the use of existing facilities, to meet regulatory and environmental guidance, to maintain and revitalize AMC's existing facilities, and to contain growing backlogs of maintenance band repair (BMAR) with ever more constrained resources. Fiscal constraint's in fiscal year 1992/93 have compelled us to reduce funding below our projected annual requirements. Deferring maintenance and repair of this magnitude, to an already deteriorated facilities infrastructure, will increase our BMAR requirements and allow nature to accelerate the weathering and deterioration of our facilities.

Protecting the environment is one of our primary concerns at AMC. Accordingly, AMC is implementing new programs and reinforcing those in place to ensure compliance with all environmental quality laws and to prevent adverse impacts on the environment by AMC actions. In fiscal year 1990, State and Federal regulators carried out 350 inspections at AMC installations. The stepped-up inspection effort represented a program that is being scrutinized closer, under more laws, by more regulatory bodies. This type of independent oversight is complemented by our own environmental compliance review program the environmental audit program. An important part of that program is the follow up on problems identified during visits to the installations. AMC has adopted a "must fund" priority system that assures funding for required environmental compliance. Last year AMC had $93M of environmental compliance "must fund" requirements; for this fiscal year it's projected at $83M. However, we expect this amount to grow as new requirements are identified during the year. The fiscal year 1992/93 requirements are estimated at $155M and $118M, respectively.

There are 73 AMC installations and annexes covered by the installation restoration program, including 23 on the national priorities list which have the highest priority for work under installation restoration. Cleanup is conducted in strict accordance with EPA regulations and procedures, and we are committing ourselves to interagency agreements at each of these installations. The installation commander signs an agreement with the EPA and the State to insure that the concerns of all interested parties are addressed, that proper procedures are followed, and that remediation will conform with all applicable laws and regulations. The Defense Environmental Restoration Account (DERA) funded AMC projects, including Rocky Mountain Arsenal, totaling $122M for fiscal year 1990; for this year funding is programed for $195M. The fiscal year 1992/93 "must fund" requirements are currently estimated at $327M and $272M.

In the area of minimization of hazardous materials and waste, we have HAZMIN, the hazardous waste minimization program. HAZMIN exists to reduce the generation and disposal of hazardous substances and to reduce the threat to health and the environment. We are pleased with the progress of the HAZMIN program, and are well ahead of the Army's HAZMIN goals. The goal for 1992 is to get below 37M kilograms of industrial hazardous waste. We ended calendar year 1990 at 38M—this is a 46 percent reduction from the base year, 1985. The command is proud of our installations for doing a particularly good job in the HAZMIN program.

Building on the progress made against the established HAZMIN goals, we are developing several initiatives to reduce to zero the discharge of industrial hazardous waste into the environment.

— Environmental considerations, including HAZMIN, are being integrated into the program requirements for weapons systems acquisition.

— Ongoing research and development initiatives will also contribute to our reaching the target. In industrial operations we are looking at better ways to apply metal coatings, and to paint and strip stems. In pyrotechnics, explosives and propellants operations we are experiencing success in recovery and reuse of components, and in supercritical fluid extraction of propellants from rocket motors.

— For all industrial processes that generate hazardous waste, we are conducting HAZMIN audits. Audit findings are then applied to the "front end" of the process to reduce generation by methods such as inventory control and substitution for hazardous material where possible. Audit findings are also applied at the "end of the pipe" to treat or reduce the amount of hazardous waste to be disposed of, by doing things like recycling solvents or treating plating solutions. We expect the HAZMIN audit program to be a significant factor in reducing wastes to zero.

An example at the "front end" of the industrial process is our effort in the substitution for chlorofluorocarbon (CFC) solvents and halon coolants. Both compounds are severe stratospheric ozone depleters, and are banned by both International Protocol and U.S. law by the year 2000. Industry is developing substitutes for both compounds, and the Army is working to articulate our requirements, know the parameters for their use, and evaluate the alternatives.

Through working groups with the other services we transfer information and share experiences and problems in the environmental field. Included are the Joint Depot Environmental Panel, the Installation Restoration Technology Coordinating Group, and numerous technical meetings with the EPA.

The Resource Conservation and Recovery Act (RCRA) requires us to obtain permits, for the treatment, storage and disposal of hazardous waste, at the majority of our installations. One type of treatment that will require permits is the burning or detonation of munitions. To facilitate the permitting process we have been instrumental in working with the Ordnance Executive Environmental Steering Committee, a tri-service group, to insure that all services have access to information and data required by the EPA.

NEPA, the National Environmental Policy Act, requires the proponent of an action to analyze and document environmental impacts before making any decision that may affect the environment. NEPA documentation is required for acquisition of systems or materiel. It is required not only for construction projects but also for reorganizations, mission realignments and reductions-in-force. Every base closure action requires NEPA documentation and also includes environmental cleanup.

As the Army's industrial base, AMC stepped up operations to provide critical logistics support for our personnel and equipment systems in Operation Desert Storm. In supporting Desert Storm we have focused our environmental efforts on three areas: determining which installations could potentially violate environmental requirements, minimizing temporary noncompliance with regulations and permits, and examining field-expedient methods to bring potentially noncompliant activities into compliance. Despite the potential for noncompliance during the Desert Shield/Storm production surge, we were very successful in complying with environmental requirements.

AMC commitment to the environment is real and we are stepping up to meet the challenges. We understand the risks associates with not meeting our compliance requirements and have instructed commanders to take all necessary actions to ensure that all legal requirements are complied with. These are must fund bills that we have to recognize and deal with. We need your continued support. Now before I close, let me relate to you initiatives in total quality management. AMC has applied total quality management initiatives since 1987. In embracing total quality management principles and practices, we have made a commitment to focus on the customer and emphasize teamwork, training, and continuous process improvement in order to increase quality and value added, and reduce cycle time. This adds up to an overriding commitment to quality and customer satisfaction, in everything we do, every day.

I am personally involved and committed to continuously improving everything AMC does. I am supported by every single member of the AMC team in challenging how we do business, eliminating that which does not add value in terms of what our customers want, and then working to improve that which does add value.

We have established an intensive training curriculum to assist each element of AMC in preparing their entire staff for implementation. Each organization is trained, starting with the senior leaders of each organization—there are no exceptions.

We are already seeing positive results from involving personnel in developing and implementing improvements in all corners of our command. Some process improvements have been highly successful in improving quality and customer satisfaction while saving thousands to millions of dollars and reducing cycle time. We have also extended this concept to our relationship with our contractors through a contractor performance certification program. We have certified 12 contractors and an additional 35 certifications are in process. We are seeing an improvement in quality and delivery at the same time government costs for government plant personnel and travel costs for procurement activity personnel have decreased on the order of 50-percent. This has served as a model for the DOD wide exemplary facility program now under development. A tri-service regulation outlining the exemplary facility program has been drafted and is currently being staffed with the services. It is through these focused efforts of the total AMC team that the cumulative results of each new improvement will continue to make a significant and noticeable difference.

Mr. Chairman, in closing I want to thank you and the members of the committee for this opportunity to testify. To sum up, I believe the AMC/industry partnership did a superb job in supporting our Southwest Asia fighting force in Desert Shield/Storm. I cannot speak highly enough of the dedicated AMC workforce or industry cooperation for Operation Desert Storm. We must ensure funding remains adequate to support future contingencies and for maintaining future readiness of our Armed Forces. I am confident we can support the logistics requirements of the Army through fiscal year 1992. In fiscal year 1993 we have acknowledged the challenge to maintain the level of support AMC has provided in the past.

We are clearly committed to achieving efficiencies and support the Defense Management Review initiatives.

We must always remember our principal job is to sustain the Army combat mission whenever and wherever they are needed.

I would like to make one final note before closing. The committee should understand that the services' ability to sustain our people and weapon systems in future conflict is being centrally strengthened through the efforts of the Joint Logistics Commanders, General McDonald, Commander, Air Force Logistics Command; Lieutenant General McCausland, Director, Defense Logistics Agency; General Yates, Commander, Air Force Systems Command; Vice Admiral Loftus, Deputy Chief of Navy Operations for Logistics and I, constitute this body. Lieutenant General McCausland and Lieutenant General Winglass, Deputy Chief of Staff for Installations and Logistics of the Marine Corps, sit with us to work one central integration of research and development, acquisition, and logistics support effort.

For 25 years, this joint effort has worked together with increasing effectiveness. We are committed to further improvements similar to those example's I have addressed earlier in my testimony. The result will be both a healthier ability to support joint combat forces readiness and sustainment with a lower price to the taxpayer.

I appreciate the opportunity to appear before this committee.

Senator DIXON. I thank you, General Tuttle. We are honored to have the distinguished senior Senator from South Carolina here. Would you like to make a statement now, Senator?

Senator THURMOND. Very briefly.

Senator DIXON. Senator Thurmond.

Senator THURMOND. Thank you, Mr. Chairman. I want to join you, Mr. Chairman, in welcoming General Tuttle and General McDonald.

Mr. Chairman, as I pointed out during last week's hearing with their counterparts from the other services, there should be no doubt that the officers appearing before us today and their subordinates deserve a large share of the credit for the success of Operation Desert Storm.

There is no question in my mind that, had it not been for the support and planning of General Tuttle and General McDonald, Operation Desert Storm would not have been the marvelous success that has done so much to lift the spirit of this Nation.

General Tuttle and General McDonald, thank you for your professional work in support of Operation Desert Storm. You and your staff have done a yeoman's service to our Nation and deserve our gratitude.

Now that you have successfully met the challenges of Desert Storm, you will be facing the challenge of the shrinking defense budget. I urged your colleagues to speak out forcefully to ensure that the logistic community continues to maintain its fair slice of the defense budget. I make you the same challenge. Our combat forces will only be as capable as the logistic train that supports them.

Thank you, Mr. Chairman.

Senator DIXON. I thank the distinguished senior Senator from South Carolina. General McDonald, we are delighted to have you, and will be interested in your testimony.

STATEMENT OF GEN. CHARLES C. MCDONALD, USAF, COMMANDER, AIR FORCE LOGISTICS COMMAND

General MCDONALD. Thank you, Mr. Chairman, Senator Thurmond, and members of the Subcommittee on Readiness, Sustainability and Support. I, too, appreciate the opportunity to testify today on the Air Force Logistics Command's support to Operations Desert Storm and Desert Shield, and to address our fiscal years 1992 and 1993 programs. I will also discuss the challenges we face as we continue efforts to sustain readiness and support of our forces in a rapidly changing defense environment.

With your approval, I ask that my prepared statement be entered into the record.

Senator DIXON. That will be the case.

General MCDONALD. The past 2 years have seen dramatic changes in the national security environment, and yet our national interests are still threatened. The recent conflict that we have been talking about with Iraq is certainly germane. Our challenge is to reduce the size and change the shape of our operations to accommodate this emerging security environment. Another challenge, one that I take as a very personal challenge, is to ensure that adequate readiness and sustainability levels are available to meet future contingencies.

Past support of Air Force readiness paid off during Desert Shield and Desert Storm. From my perspective there was an almost transparent transition from peacetime to wartime, and the reason for that is because we practiced for years to do it that way. This was our first opportunity in recent years to do it on the scale, of course, that was executed during that engagement. And we did a lot of adjusting to meet the evolving requirements of the theater's commander.

Yet through it all we were involved principally in four areas, providing integrated weapons systems support from the management side, commodity support also from the management side, accelerating the maintenance of aircraft and other systems necessary, and expediting transportation. My record statement addresses each of these in some detail, however, let me cite a few illustrations of our active involvement. We deployed over 1,660 personnel from the Air Force Logistics Command. While most of these were Active duty military, we also sent DOD civilians and reservists.

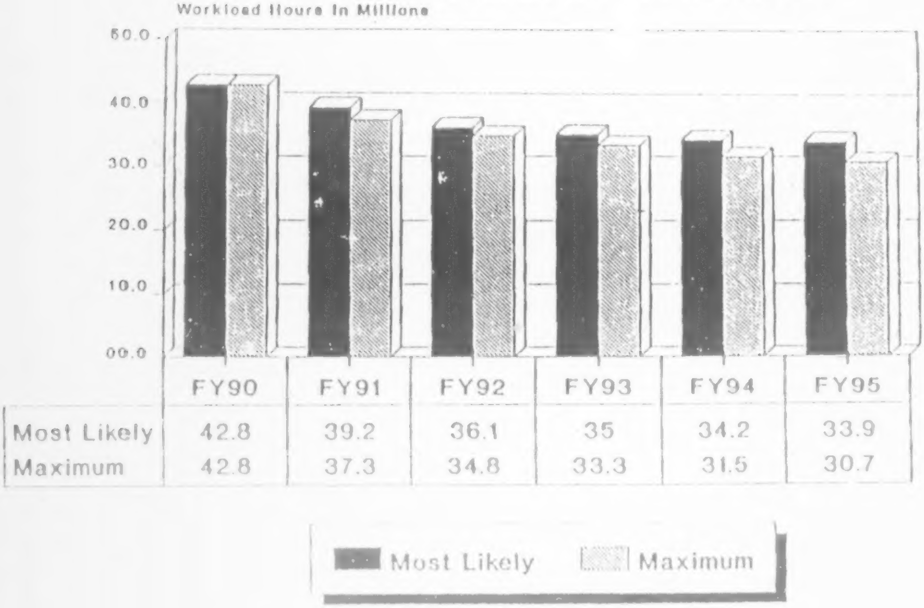
Specialized teams such as our combat logistics support teams provided immediate assistance to the operating forces by repairing battle damaged aircraft on the scene. These included 15 A-10s, 3 B-52s, 1 F-15, and 3 F-16s. You may have seen on CNN a picture of one of those A-10s with over 300 bullet holes in the wings and fuselage. The combat commanders deployed were able to maintain roughly a 90 percent aircraft mission capable rate across the board. Many of the aircraft were in the high 90's. Spares support was maintained at a level which helped achieve nearly 100 percent of the planned sorties. And during the period we accelerated depot maintenance production of 41 of our C-141s to meet the extensive airlift requirements. And although the C-5s flew nearly four times the peacetime operating rate, mission capable numbers were well in excess of peacetime standards.

AFLC also coordinated support for many key commodities. We shipped more than 556,000 short tons of munitions. Our ammunition control people at Hill Air Force Base kept tight control of the worldwide inventories and coordinated their movements in order to assure that our version of just in time inventories were available. Over 83,000 tons of cargo and 9,500 passengers were moved to the area of responsibility from AFLC air terminals. Tinker Air Force Base's aerial port alone was moving 300 short tons daily by the time of the cease fire.

While we are proud of our accomplishments, there was a cost association with these successes. As of the end of February we had expended about $577 million over and above our normal operating expenses to support the war. We project by the end of this fiscal year that our total obligations will be in the neighborhood of $1.09 billion. During the conflict the funds needed to pay for operations were reprogrammed from monies elsewhere otherwise allocated in our fiscal year 1991 budget.

Meanwhile, we are getting smaller. By the end of fiscal year 1995, the Air Force's aircraft inventory is projected to decrease by 15 percent and flying hours by 19 percent. Because of this downsizing and because many of the systems (the older systems such as the F-111, the B-52 and the F-4, which in the past have generated much of our depot work load) will be retired, we expect a substantial decrease in depot work load during this same period. This can be seen on this slide (attached) which depicts the projected decrease in depot work hours from 42.8 million in 1990 to 33.9 million hours in 1995. That is a 21 percent decrease. So we are downsizing in accordance with the future size of our force structure.

AFLC DEPOT MAINTENANCE WORKLOAD TRENDS



	FY90	FY91	FY92	FY93	FY94	FY95
Most Likely	42.8	39.2	36.1	35	34.2	33.9
Maximum	42.8	37.3	34.8	33.3	31.5	30.7

CHART 1

These force structure changes also impact the nature of our work. As older systems like the F-4 and the B-52 are retired, there is a decreasing need for traditional aircraft maintenance skills such as sheet metal and hydraulics. Beginning with the fielding of the F-15s and continuing into the present with the F-16, the B-1, and the F-117, we have seen almost exponential growth for technical skills, particularly in software development, handling composites and repairing composites, and other highly technical areas. Additionally, use of robotics and automated test equipment reduces our requirement for manpower in intensive depot operations as we move further into the decade of the 1990s.

Throughout AFLC, at every level of the organization, we are emphasizing quality. This means a process-oriented approach that demands and permits continuous quality improvement. It also means a strengthened partnership with both our customers and our vendors to ensure to the degree possible that the right support is provided at the right time at the best cost. Because our work force has shrunk by 7,500 personnel in the last 2 years, we must delegate more responsibility and accountability to those who actually accomplish the task. Are we making progress? I believe we are.

Two AFLC organizations have been named as the 1991 recipients of the Federal Quality Institute Quality Improvement Prototype Awards. The Sacramento Air Logistics Center and the 1926 Computer Group at Warner Robins Air Logistics Center were chosen from a field of 34 applicants government-wide. There were only two selectees, both from AFLC. Because we are proud of this cultural change, we are currently competing as a command for the President's Award for Quality and Productivity Improvement. I believe much of this is behind the success of Desert Shield and Desert Storm.

Because of people costs, we have also implemented an organizational structure which permits us to perform our mission with fewer employees. Depot operations have been restructured into product directorates and service directorates. This new structure, adapted in part from the private sector, focuses on a weapons system, a product, or a service. It is integrated across the classical functional lines that had been the tradition of the services. This organization strengthens integrated weapons systems management and enhances customer support while achieving important savings through streamlining of function, reduced overhead, and more efficient operations. And, again, I believe that is why we have been able to maintain the level of service to our customers during this period of time even with significantly reduced personnel.

Also, to continue supporting our customers in a period of declining budgets, we rely on automated data systems. Through our logistics management system modernization, we are realizing millions of dollars in savings through increased efficiencies. For example, the implementation of the Requirements Data Bank is expected to provide $245 million in savings by improving the precision of our requirements process so we do in fact have the ability to forecast what it is that we will need in the future.

Our Contracting Data Management System is projected to save $105 million as it automates our contracting process and it will also improve our competition rates, we believe. Our Weapons Systems Management System, used extensively during Desert Storm, assesses which aircraft are ready for battle and determines how long they can operate before maintenance will be required. And the operation of our Stock Control and Distribution System has given us control for the first time of serviceable assets and speed the delivery to the customer. At the same time, we have been able to reduce our pipeline and thus our future requirements accordingly. So that is reflected in significant lower funding levels requested for spares for future Air Force forces.

In anticipation of these productivity gains from automation, we are also reducing the people. Approximately 6,500 positions will be deleted from our rolls based upon this modernization alone between fiscal years 1990 and 1995.

We, too, have an emphasis on improved technology insertion in our weapons systems because it has improved the reliability and the maintainability of our fielded systems. This applies to both the design phase of new systems as well as to the selective insertion of technology into existing aircraft and missiles and support equipment. The benefits from these programs have been substantial, leading to fewer depot overhauls and a resultant decrease in labor and materiel costs.

Continued emphasis on technology insertion is expected to be one of the benefits derived from the formation of the Air Force Materiel Command next year. By integrating the work force and the infrastructures of both the Air Force Logistics Command and the Air Force Systems Command, we believe that we can combine the strengths and the capabilities of both commands and will employ that kind of talent even better. The new command will also improve our current business practices by providing a totally integrated weapons systems management process. We call it cradle to grave management.

DOD has also implemented initiatives under the Defense Management Review in an effort to provide a strong defense at a lower cost. Each of these initiatives has major import for Air Force Logistics Command's Air Logistics Centers. I will highlight just two. The first, DMRD 902, calls for the consolidation of supply depots and is currently being prototyped in the San Francisco Bay area. Under this program our Wholesale Supply Center at the McClellan Air Force Base will be transferred to DLA on the 21st of April, just a few days hence. We have been working with both DLA and the other services to mitigate any impact on support to the operational commands during this transitional period.

The second initiative, DMRD 908, requires the services to achieve more efficiency in the maintenance depots. $1.7 billion in near term savings and $2.2 billion in long term savings is to be achieved by a combination of individual service actions and joint service initiatives. In the Air Force, short term savings will be achieved through improved materiel management, reduced requirements for supplies and equipment, less contracted engineering technical support, and we are drawing down our depot presence at Royal Air Force Base Kemble in the United Kingdom, in addition to reductions in overhead personnel.

Some short term savings have already been realized because the product directorate concept is working. Total quality management is working. Improved technology insertion is paying off and logistics management systems upgrades are on track and exceeding our productivity projections.

Long term savings is a joint affair, as briefly touched on by General Tuttle, and is being overseen by the Defense Depot Maintenance Council or the DDMC. This consists of representatives from all the services. This joint group advises the Assistant Secretary of Defense for Production and Logistics regarding depot maintenance policy and practices. Under their guidance, long term savings of $2.2 billion must be achieved by increased interservicing, competition of non-core work loads between the services and within the public and the private sector, and even better use of current depot capacity.

Mr. Chairman, I want to thank you and the distinguished members of this committee for your past support of Air Force Logistics Command, and your continuing support as we address the challenges of the future. I will be happy to respond to your questions.

[The prepared statement by General McDonald follows:]

PREPARED STATEMENT BY GEN. CHARLES C. MCDONALD, COMMANDER, AIR FORCE LOGISTICS COMMAND, U.S. AIR FORCE

LOGISTICS SUPPORT IN DESERT STORM AND LOGISTICS PROGRAMS IN FISCAL YEARS 1992-1993

Mr. Chairman and members of the Subcommittee on Readiness, Sustainability and Support. I appreciate the opportunity to testify before you on Air Force Logistics Command's recent involvement in Desert Storm and our fiscal years 1992-1993 programs. During this testimony, I'll also discuss some of the challenges we face as we continue efforts to sustain readiness of the fleet and support the operational forces in a rapidly changing defense environment.

As you are aware, AFLC's mission is to ensure the readiness and sustainability of weapon systems worldwide. Readiness allows the Air Force to properly train for war. Sustainability involves pre-stocked assets, such as war readiness spares, which support combat operations until the depots and industry can meet the demands of an extended conflict. We continually assess our capability to support combat operations and regularly exercise peacetime to wartime conversion.

Consequently, there was an almost transparent transition to wartime operations during Desert Shield/Storm. Our role in the war was principally in four areas: deploying AFLC and our large tenant organization personnel; providing integrated weapon system and commodity support; accelerating maintenance; and expediting transportation.

Although AFLC's primary product is materiel, the command deployed 1,664 personnel. While these were mostly active duty military, 193 reservists were also brought on active duty for up to 1 year. Fifty-five of these reservists served in the combat theater. In addition, 15 Air Force civilians assigned to AFLC deployed to the combat theater.

While most of those we deployed were categorized as base support personnel (e.g., security police, medical, etc.), the combat logistics support squadron personnel who were deployed have missions unique to AFLC. A key role of these squadrons was the repair of combat battle-damaged aircraft. During Desert Storm, these teams were involved in repairing 22 aircraft with significant battle damage including 15 A-10, 3 B-52, 1 F-15, and 3 F-16 aircraft. Rapid area distribution teams are another key element of our combat logistics support squadrons. These teams are made up of supply and transportation specialists and are used worldwide to help control and expedite the movement of supplies. As the focus of the operation turns toward returning the deployed forces to their home bases, we have sent additional teams to the theater to assist.

This large deployment had a significant impact on our home station forces, especially in the areas of aerial port operations, mobility processing, medical care, and base security. In many cases, remaining personnel worked much longer hours. Even then, services were sometimes degraded. Reservists helped us to fulfill our commitments and eased the burden at home. In total, 701 reservists participated. This included the 193 reservists previously mentioned and individual mobilization augmentees who volunteered for numerous, short tours of duty.

In AFLC, we emphasize measuring and improving weapon system support because weapon systems provide the combat capability that our customers, the warfighting commands, need to meet the threat. We achieve these objectives not only by continuous process improvement but also by balancing resources and capabilities within and across all weapon systems. This is why we continue to stress the need for Integrated Weapon System Management (IWSM). To ensure that IWSM is effective, we are creating weapon system oriented management structures and weapon system oriented management information tools. Since last year, weapon system product divisions at the Air Logistics Centers (ALC) and weapon system force structure directorates at HQ AFLC have been in place. Additionally, management tools such as the Weapon System Management Information System (WSMIS) are giving us good visibility on readiness and sustainability measures, most importantly, the identification of the items which will limit combat capability. During Operations Desert Shield and Desert Storm, we were able to gain insight as to how well our IWSM initiatives were working.

With strong support from AFLC, the combat commanders were able to maintain an extraordinary level of aircraft mission capability, in many cases over 90 percent. Spares support was maintained at a level to achieve nearly 100 percent of the planned sortie requirement. However, it should be noted that this achievement depended upon support from the other theaters. It also depended on the deferral of maintenance by postponing inspections or temporarily extending time change limits on a large number of items. For example, we extended the interval for removal of the F-16 landing gear. This kept aircraft in theater mission capable longer without heavy maintenance. However, toward the end of Desert Storm our depot was repairing landing gears at unprecedented rates.

An immediate weapon system support task for Desert Shield was to fill shortages in War Reserve Spares Kits (WRSK) for deploying units. The MAJCOMs were able to precisely identify the items needed. This was partly because of WSMIS. The system provided an assessment of each unit's 30-day combat capability and a corresponding problem parts list. In turn, the ALCs could expedite the repair or procurement of critical items and assist the MAJCOMs in filling or creating spares kits prior to deployment.

Our weapon system oriented management structure resulted in better control of resources during Desert Storm. When an issue did arise, we were able to respond quickly. For instance, during the war, cracks were discovered in the leading edge of several F-15 vertical stabilizers. A team from our 2955 Combat Logistics Support Squadron was stationed in the theater and notified Warner-Robins ALC of the problem. The system program manager at the ALC put together the kits and tooling to make the repairs and shipped them to the theater. Within a week, approximately 15 vertical stabilizer cracks had been repaired and the aircraft were kept combat ready.

An example of the broad range of the IWSM activities was support to the F-117A. Although F-117A accounted for a small percentage of the combat aircraft in the theater of operations, during the initial days of the air war, this aircraft flew a significant percentage of the missions in the theater. One reason, perhaps the overriding reason, is a system program manager with total control of support functions.

This integrated approach enabled us to expedite special actions on each of the weapon systems we support. For example, during Desert Shield/Storm, the C-5 flew 3.5 to 4 times the peacetime monthly flying hour program. Despite this extraordinary demand, the aircraft maintained mission capable rates in excess of peacetime standards. Why? We anticipated and anticipated correctly. The C-141 was also used extensively. We accelerated depot maintenance production of 41 aircraft. For Special Operations Forces aircraft, several reliability improvements helped overcome the harsh environmental conditions of the theater. Modifications were accomplished to expand weapon system delivery on the B-52 and improve communications for the KC-135.

Beyond support of weapon systems, AFLC employed this integrated approach to coordinating support for many key commodities. The shipment of Desert Storm munitions totaled approximately 556,900 short tons. Commodity managers maintained continuous surveillance of worldwide inventories and coordinated with theater and transportation commands. In anticipation of shortfalls to meet projected requirements, we accelerated production of the GBU-27 laser guided bomb.

Spare aircraft drop tanks, racks, adapters, and pylons needed to carry external airborne weapons were practically nonexistent in the theater at the start of operations. By the time of the cease-fire, $237 million worth of assets were in place.

Electronic warfare systems are an essential component of modern combat operations. The effectiveness of these systems is dependent on our ability to rapidly change system software to accommodate new threats. To improve our response, we deployed 161 digital computer systems. As a result, reprogramming was accomplished at an average of less than half the standard time.

Early in Desert Shield when the chemical threat seemed imminent, we accelerated procurement of a Multi-Man Intermittent Cooling System. This device lets maintenance personnel work for sustained periods in hot weather while in their chemical protection gear. We were able to take this system from R&D to production in less than 6 months. The first units were delivered in late September and by December, we had provided the full requirement.

Because we received adequate funding during the 1980s, we were sufficiently postured to provide the logistics resources essential to sustain combat capability. To support the war, we accelerated the repair of over 80,000 spare parts. In addition, we expedited the overhaul of 70 aircraft.

Our transportation operations played a crucial role. Over 83,000 tons of cargo and over 9,500 passengers from TAC, SAC, AFCC, AFLC, the Army and Marines were moved to the theater from the AFLC air terminals at Wright-Patterson, Robins, Hill, Kelly, and Tinker AFBs.

Tinker Air Force Base was AFLC's largest transportation operation. From an average of 50 tons of cargo per day prior to Desert Shield, Tinker was moving an average of 300 tons daily by the cease-fire. Reservists from various mobile and fixed aerial port squadrons provided augmentation. The air terminals at Hill and Kelly AFBs handled the bulk of the Air Force munitions airlift. Robins also contributed by supporting the airlift of large quantities of bare base support kits.

We achieved in-transit visibility by creating a prototype "Air Force Logistics Information File" (AFLIF). By using existing supply and transportation data systems, AFLIF gave us a first ever capability to track materiel from the time it was ordered until it was received at destinations in-theater. Consequently, we were able to find and redirect shipments already en route to meet urgent demands in the theater.

To meet increased throughput of Desert Shield/Storm, we designed and procured mechanized materiel handling systems for four aerial ports—Dover AFB, Travis

AFB, Tinker AFB, and McGuire AFB. In some cases, throughput was increased by 50 percent. Design is underway for a high density storage aids system for USCENTCOM to handle returning supplies and equipment at MacDill AFB.

We were also able to support the operating commands more effectively during the crisis because of past investments made to modernize our Logistics Management Systems. The WSMIS identified weapon system support problems in 1 to 7 days. In the past, identification of the same problems would have taken 60 to 90 days. Aircraft sustainability evaluations were in the hands of planners and system program managers in as little as 6 hours. Previously, this would have required a minimum of 30 days. Additionally, WSMIS quickly provided munitions planning information and readiness assessments of our combat assets.

During Desert Shield/Storm, Requirements Data Bank (RDB) identified critical components and parts and prioritized repair in real time. In addition, RDB permitted more efficient allocation of funds and was instrumental in preempting spares shortages.

Finally, the Stock Control and Distribution (SC&D) system which controls the storage, allocation, and movement of AFLC inventories, improved timely support to theater operations. We knew where things were and in what quantities. When we needed to identify mid-East bound materials, system programming changes were accomplished in less than 6 hours. SC&D helped to manage orderly flow of cargo through air terminals. On-line palletization/repalletization, optimum load planning, and shipping data made this possible.

While we are proud of our accomplishments, there is cost associated with them. As of February 28, we had expended an extra $577.5 million in support of the war and project our total additional obligations for fiscal year 1991 to be approximately $1.09 billion.

A major portion of our contribution to the war involved accelerating aircraft engines and engine modules. We funded this workload by reprogramming monies otherwise allocated in the fiscal year 1991 budget. To continue the support necessary to reconstitute the forces as they redeploy from Southwest Asia, additional reprogramming will also be required in the 3rd quarter of this fiscal year. For example, we currently expect to run out of engine overhaul money before the 4th quarter of fiscal year 1991 unless additional monies are made available. Twenty million dollars is needed this fiscal year. We appreciate the support of Congress in providing supplemental appropriations to cover these costs. Timely release of these funds is needed if we are to effectively use them. The residual forces left behind in the area of operation will also require additive support, support not covered by the fiscal years 1991 or 1992 budgets.

Another concern is the condition of the aircraft and engines that have flown close to or beyond their limits, the aircraft damaged in battle, and the reparable parts that have been deployed. We could see an increase in the depot repairs necessary to return these items to fully serviceable condition and forecast the costs of Desert Storm to continue to accumulate through the remainder of this fiscal year and well into fiscal year 1992. However, the recent force structure reductions would offset some of these increases. Assuming all forces have redeployed by late summer, we will be able to provide more definitive requirements as detailed inspections and inventories are accomplished.

While a great deal of the logistics success of this operation depended on the warfighting focus of the Air Force logistics community and on the special actions we took before and during the conflict to assure weapon system support, some of the success is owed to the actual sequence of events. Working closely with CENTAF, we reacted rapidly, expecting to posture our logistics support for a war of indefinite duration. Fortunately, we had almost 6 months in which to prepare before the actual start of hostilities.

When hostilities began, aircraft losses and battle damage were almost negligible. Our bases and logistics infrastructure remained intact. Our landings were unopposed, and we didn't have to contend with chemically or biologically contaminated assets. Terrorist activities were minimal. We maintained a high level of combat support over the course of a relatively short conflict while denying the enemy his own logistics capability. Given our preparations, there was every reason to expect success. Had the enemy been more capable or simply more willing to accept losses from focused attacks on our bases or logistics systems, our job would have been more difficult and our costs higher.

In addition to our direct support of U.S. forces in Desert Shield/Storm, AFLC's International Logistics Center (ILC) played a critical role, intensifying our logistics support to allies engaged in the Gulf. The ILC's peacetime mission is to provide financial and program management of AFLC-managed foreign military sales (FMS) programs. However, during Operations Desert Shield/Storm, the ILC's activities took on additional significance as a number of FMS customers supported operations in the region. The ILC expanded its efforts to support allies such as Saudi Arabia, the United Kingdom, Belgium, Egypt, Canada, NATO, Bahrain, Oman, and the United Arab Emirates.

All of the customer countries involved in Gulf operations received expedited logistics support from AFLC. Thousands of new orders were placed for assets managed by AFLC for FMS customers. Additionally, FMS customers purchased and received expedited delivery of the equipment required for survival and operations in the region: tents, vehicles, uniforms, gas masks, and chemical protection suits.

The Gulf nations, and particularly Saudi Arabia, were well-equipped and provisioned for their task in Operations Desert Shield/Storm. The ILC played a major role in ensuring the readiness of the Royal Saudi Air Force (RSAF) and allied air forces. The following statistics tell the story:

— The RSAF F-5 fleet of 93 aircraft averaged seven grounded aircraft during Desert Shield/Storm compared to an average of 13 prior to the conflict.

— The RSAF F-15 fleet of 82 aircraft averaged no more than two grounded aircraft at any given time.

— One of the RSAF KE-3A tanker fleet of eight aircraft was grounded; the remaining aircraft flew continuously.

— The RSAF E-3A fleet of five aircraft was never grounded. This is the highest sustained state of combat readiness these aircraft have maintained since delivery of the final RSAF E-3A in June 1987.

The successful conclusion of Operations Desert Shield/Storm illustrates the important contribution of our FMS allies and demonstrates the effectiveness of the system AFLC has in place to produce and distribute the materiel and services sold to our FMS customers. The conduct of operations in the Gulf also makes a strong case for adequate stock levels and distribution systems that allow the U.S. military and its allies to respond to national emergencies/contingencies with the wherewithal to prevail.

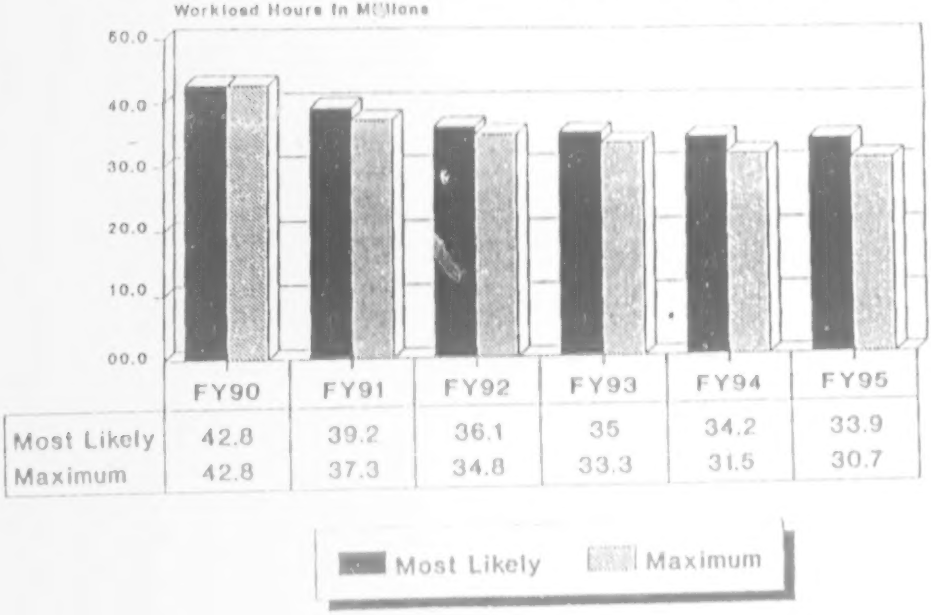
CHANGES TO THE LOGISTICS ENVIRONMENT

The war with Iraq is only one indicator of the dramatic changes in the national security environment during the past 2 years. This is particularly true when one considers the myriad of changes in the Soviet Union and Eastern Europe. Our challenge is to reduce the size and change the shape of our operations to accommodate this emerging security environment while ensuring that readiness and sustainability levels are maintained to meet future contingencies.

Force reductions begun in fiscal year 1990 are programmed to continue through fiscal year 1995. During this 6 year period, the Air Force's aircraft inventory is projected to decrease by 15 percent and flying hours by 19 percent. Because of this down sizing, and because older systems (e.g., F-111, F-4, B-52) which in the past have generated much of our depot workload will be retired, we expect a 21 percent decrease in depot workload during this same period (Chart 1).

CHART 1

AFLC DEPOT MAINTENANCE WORKLOAD TRENDS



	FY90	FY91	FY92	FY93	FY94	FY95
Most Likely	42.8	39.2	36.1	35	34.2	33.9
Maximum	42.8	37.3	34.8	33.3	31.5	30.7

In addition to decreasing levels of depot maintenance work, these force structure changes also impact the nature of our work load. As the older systems are retired, there is a decreasing requirement for traditional aircraft maintenance skills such as sheet metal and hydraulics. Beginning with the fielding of the F-15 and F-16 and continuing into the present with the B-1 and F-117, we are seeing an increasing requirement for skills in software development, composite repair, and other high-tech fields. Additionally, application of robotics and automated test equipment reduces our need for manpower intensive depot operations as we move into the decade of the 1990s.

The integration of AFSC and AFLC into the Air Force Material Command will also affect the logistics environment of the future. The formation of the new command can build a stronger Air Force by providing an integrated approach to weapon systems management. Melding the talents and capabilities of the two work forces and the combination of infrastructures will permit the Air Force to maximize the capabilities of both. It will also improve our current business practices by integrating the acquisition and support functions while providing a single face to the operational commands. Moreover, we provide a clear line of accountability and responsibility. This will enhance our responsiveness to our users while providing our Air Forces the most superior weapon systems and support in the world. A phased implementation is scheduled to begin on October 1, 1991 with the new command formed on July 1, 1992.

DOD began reviewing defense management processes in 1989. The underlying concept of the Defense Management Report emphasizes the use of sound business practices with attendant dollar savings. One initiative, that of stock funding depot level exchangeable items, is expected to decrease the number of exchangeables repaired by the depots by 10 percent as base level units repair more items locally.

Other Defense Management Report Decisions (DMRDs) impact the workload and the work force required at our depots. For example, DMRD 902 will consolidate the Department of Defense (DOD) supply depots currently managed by the services under a single manager, the Defense Logistics Agency (DLA). The consolidation of five supply depots in the San Francisco Bay Area (Naval Supply Center—Oakland, Defense Depot Tracy, Sacramento Army Depot, Sharpe Army Depot, and Sacramento ALC) to serve as the prototype for future consolidation efforts is currently underway. Consolidation of other supply operations is to proceed after the Bay Area prototype is implemented.

Once implemented, this DMRD will divide what has traditionally been an integrated wholesale/retail Air Force supply operation. The DMRD requires DLA to assume responsibility for whole sale distribution support to Air Force Inventory Control Points including the receiving, storing, and surface shipping of items. The Air Force will retain retail support to depot maintenance and base tenant organizations.

Because DLA will now own the storage function for both the retail and wholesale operations, there will have to be a direct interface between DLA and the Air Force in order to support the retail mission. To facilitate this interface, we have completed a Master Memorandum of Agreement (MMOA) with DLA detailing the responsibilities and working relationships for both parties. In addition to this "umbrella" MOA, local installation plans and inter-service agreements are being developed to ensure that the transition of operations from the Air Force to DLA is smooth and has a minimal impact on mission support. The transition plan for Sacramento ALC is already completed and ready for implementation on April 21, 1991.

Beyond changes at our depots generating from implementation of DMRD 902, additional changes in our operations are being driven by DMRD 908. This DMRD directs the DOD to take advantage of all opportunities to increase the efficiency and reduce the cost of depot maintenance operations. The Deputy Secretary of Defense has directed Departmental near-term savings of $1.7 billion from fiscal years 1991–1995 through increased efficiencies by each service. The Air Force's portion of this $1.7 billion is $391 million. Mr. Atwood also directed long-term savings of $2.2 billion through increased efficiencies by joint activities; $719 million is the Air Force's share of this long-term savings.

We plan to achieve the $391 million in near-term savings by streamlining our depot operations and reducing depot infrastructure. Several initiatives currently underway will decrease manpower requirements and associated costs while streamlining the organization. For example, our reorganization during the past year into "product directorates" has been fundamental in realizing a portion of these savings by flattening and streamlining our organization. Overhead positions have been reduced and workers at all levels have more authority over their tasks. Additionally, by instituting total quality management throughout our Centers, we have been able to improve previously less efficient processes and increase productivity. Add to this improved material management, decreased reliance on Contract Engineering Technical Support, and closure of RAF Kemble and we will meet the short-term savings required by DMRD 908.

To ensure that the $2.2 billion in long-term savings through joint increased efficiencies are obtained, the Defense Depot Maintenance Council (DDMC) was established last year to advise the Assistant Secretary of Defense for Production and Logistics on depot maintenance within the Department of Defense. The Council has been active in identifying ways in which the "joint" community can decrease the cost of depot operations. The Air Force's portion of the long-term savings goal is to be achieved through increased interservicing of depot workloads, increased competition of workloads, and increased capacity utilization.

In addition to the DMRDs, another change to the logistics environment which will affect our operations is the establishment of Corporate Information Management (CIM) study groups. Composed of functional experts from throughout the Department, these groups have undertaken a top-to-bottom analysis of how DOD collects, manages, and uses data. This process will require considerable time to identify and design the core processes that can benefit from DOD-wide application.

Within the Materiel Management and Distribution areas, DOD has designated Executive Agents to select and implement interim standard systems. These systems will provide essential support while the final CIM systems are being defined, designed, and implemented. This interim capability will be as consistent as possible with the long-range CIM effort and reduce the cost of our eventual transition into CIM systems. Interim systems should reduce the number of DOD management information systems required to perform our material management and distribution missions. This allows us to achieve near-term savings and make the immediate changes required to achieve other DMR savings. Sufficient investment of funds in these interim efforts is necessary to achieve overall savings.

We remain committed to the long-term improvements implicit in the CIM effort, yet we must continue day-to-day operations. Our information management systems are vital to logistics support. They are the infrastructure that ties together the many diverse and complex actions required to support our modern force structure. AFLC's information management systems must work and work well, or readiness and sustainability will be affected. This is especially true as we adjust to reduced funding and manpower. We must, therefore, ensure that we continue a prudent level of investment in current systems. In many cases the current systems are the key to making the immediate improvements necessary to achieve the savings projected by the Defense Management Report Decisions.

The advent of the Defense Business Operations Fund (DBOF) a very large DOD-wide revolving fund—will also affect the way AFLC operates beginning in fiscal year 1992. Next year, existing stock and industrial funds will transition to the DBOF as stipulated in DMRD 971. This transition should be basically simple and not disruptive since stock and industrial funds operate in a similar manner. Numerous changes will occur, however, when the remaining logistics support activities transition to DBOF at the start of fiscal year 1993. At that time, DBOF will include all logistical support activities currently funded directly to AFLC in the O&M appropriation as well as the stock and industrially funded activities. When transition to DBOF is complete, the funding to finance most AFLC activities will be dependent upon either surcharges on sales or the application of rates for services provided to our customers.

Under the DBOF, our obligation authority will depend upon sales of both goods and services. If sales do not materialize as projected, AFLC must decrease its activity level and its work force. If we cannot generate enough business to maintain a particular process, a cutback or discontinuation of some operations will result. So we are looking at management flexibility in this changing environment.

FISCAL YEAR 1991 PERSONNEL ACTIONS

Because of the changing scope, type, and nature of our work load, the work force to support the mission is on the decline. These factors—many of which were unpredictable 18 months ago placed us this year in a situation where we needed to substantially reduce our depot maintenance work force in a relatively short time period.

We looked at several options. Initially, we considered moving workloads between our depots to balance the number of personnel that might have to be laid-off at each location and to continue with our policy of relative size. This option was discarded for a couple of reasons. First, the cost of moving workload is very expensive, both in terms of the actual cost to move equipment and in terms of lost productivity.

Considering our fiscal year 1991 O&M budget was 7.5 percent lower than our fiscal year 1990 budget (a downward trend we expect will continue in the future), funds to move equipment, train personnel and put the necessary infrastructure in place simply were not available. Even had funds been available, the costs associated with such a transfer would not have positioned us for the competitive environment in which we must now operate. In the final analysis, this effort would only redistribute the lay-offs equally between the Centers; it would not have reduced those to be laid-off.

We also examined closing or divesting one of the Air Logistics Centers. This possibility was discarded for many of the same reasons that shifting workload between Centers was considered unrealistic. Costs to do so would have been prohibitive. And, instead of helping us meet the near-term savings mandated by DMRD 908, we would be further behind in meeting our savings objective of $391 million. Appropriate capacity for war-time surge would not be available. Finally, base closure or divestiture would have required consideration under the congressionally-mandated commission approval process, delaying any possible savings for several years. This was something that we could not afford given DMRD 908 mandated reductions.

These options discarded, we did undertake actions to mitigate impacts on our work force. AFLC began a restricted hiring freeze in November 1989. This freeze became total under the Secretary of Defense's direction in January 1990. In October 1990, we placed our on-call employees in a con-pay status, and released our temporary employees to reduce the effect on full-time permanent employees. Finally, we requested and received authority to conduct an early-out retirement program for both industrially and O&M funded employees. Because Congress decided to repeal the lump-sum provision affecting civilian retirement, the number of personnel electing retirement was much greater than we had previously projected. This, combined with the fact that we were able to backfill many O&M slots with individuals who had originally been paid from the industrial fund, decreased the final number of personnel who had to be separated.

Unfortunately, these efforts were not sufficient to avoid adverse actions for some of our employees. In September 1990, we projected that we would need to lay-off 1,188 on-calls and 5,350 full-time permanent employees. In the final analysis, because of unplanned workload and because an increased number of personnel voluntarily separated from the work force, fewer than half of the permanent employees originally projected will actually be involuntarily separated.

PERSONNEL MANAGEMENT

With the advent of DBOF and depot maintenance competitions, personnel management will continue to create challenges for future operations. Today, almost two-thirds of our work force is paid through some form of a revolving fund. Payroll is one of the largest expenses charged against these funds. Because of this, I must size the work force based on anticipated revenue from sales. I cannot restrict the size of the work force regardless of the volume or the rate of product sales. However, this is exactly the situation AFLC faces since civilian end strength ceilings must be taken into consideration when business planning and policy formation occur.

Historically, Congress has waived civilian end strength ceilings on an annual basis. This year-to-year exemption requires that each year we develop our budget and civilian employment plan, taking into consideration the potential for civilian end strength restrictions. Obviously, civilian end strength ceilings are the antithesis to good business practices.

To help ensure that the depots operate efficiently and remain competitive with the private sector, I must be allowed to flex my work force size based on revenues from sales in the defense stock and industrial funds. We are obviously concerned about our ability to compete with the other services and private industry for depot maintenance workload. We believe we are very competitive with the new technologies and facilities we have acquired over the years. However, there is concern that if we were to win workload requiring manpower above current levels, we would not be able to fulfill the contract under end strength restrictions unless Congress granted a waiver for the operating fiscal year.

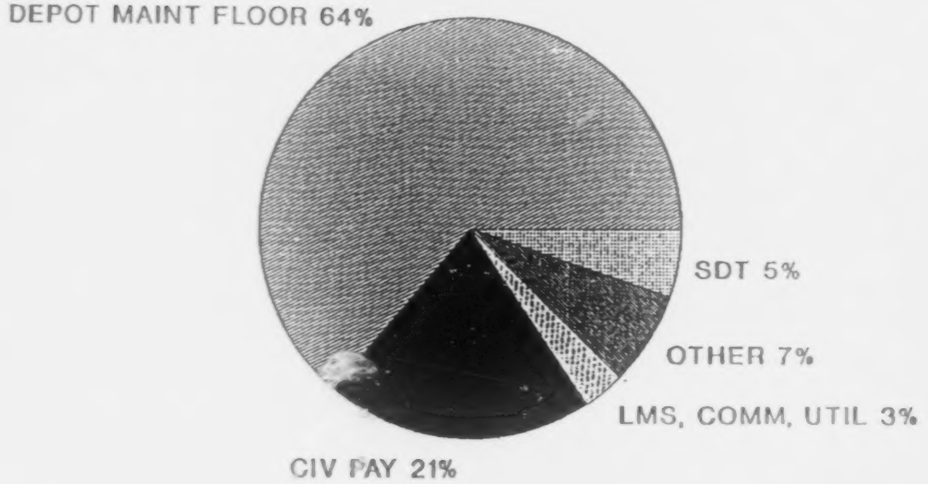
In other areas of personnel management, my staff has been working on a number of different approaches for a flexible work force which offer the potential to achieve payroll savings. We have been exploring the use of a part-time work force to meet workload peaks, especially in the areas of supply and transportation. This part of our mission is analogous to the operations of Federal Express and U.P.S. Following their example, we believe there are efficiencies to be gained through application of this type of work force scheduling.

FUNDING FOR O&M

One of the issues affecting the health of our depots and impacting our work force is adequate funding. The fiscal year 1991 O&M funding for AFLC is 7.5 percent lower than our fiscal year 1990 budget; continuing a trend that began in fiscal year 1985. Coping with these changes is made more difficult because of the limited flexibility within our O&M Central Supply and Maintenance account. Funds for depot maintenance comprise 64 percent of the O&M budget and are protected by a congressionally-mandated floor. Another 29 percent of the program consists of costs which are basically fixed costs, i.e., civilian pay, utilities and communications, data processing systems, and shipping and transportation to our customers. While the remaining 7 percent is somewhat flexible, infrastructure costs such as service contracts, travel, and supplies must be supported leaving little room for discretionary use (Chart 2).

CHART 2

AFLC MFP VII O&M FY91 FUNDING ($M)



The DMR initiatives being implemented during fiscal year 1991 also impact our O&M requirements. The DMR savings have been taken upfront. To achieve these savings, our product directorates are empowered to take actions as necessary to reduce costs and increase productivity.

Excessive funding restrictions such as floors, fences, or ceilings internal to the O&M appropriations stifle these efforts. For these reasons, I need to stress the requirement for flexibility in AFLC's O&M funding. This flexibility is essential to achieve controlled, balanced reductions in AFLC. Relief from the depot maintenance floor would be very helpful in this regard.

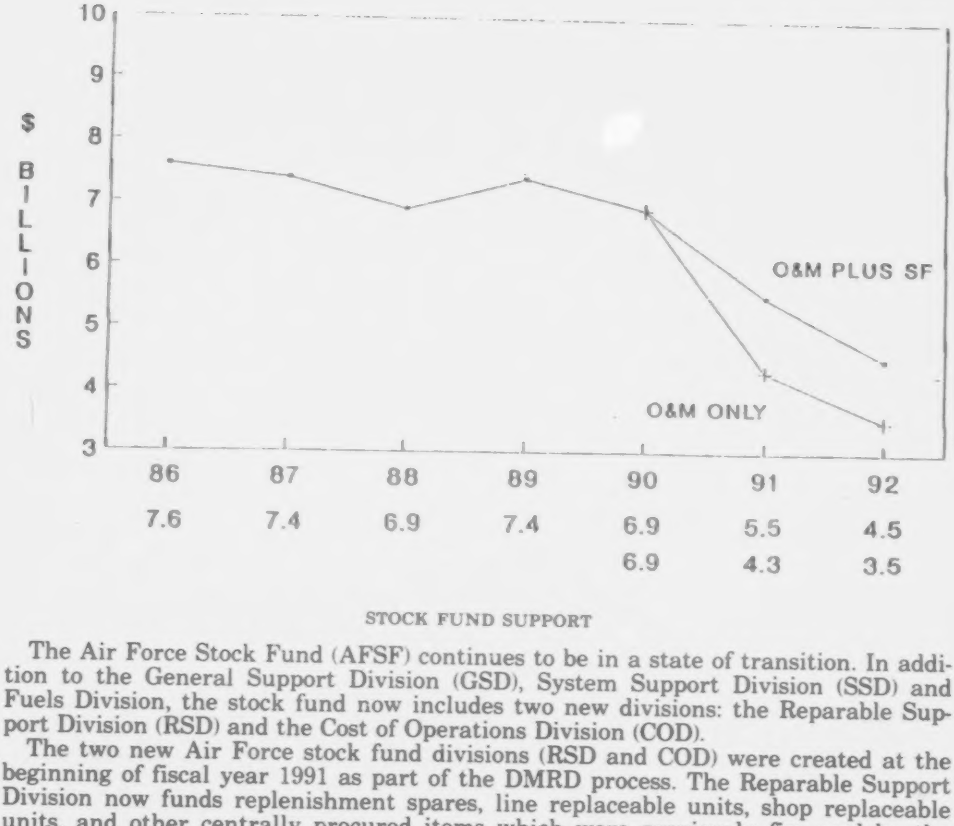
Our support to Desert Shield/Desert Storm has also affected our operating accounts, most significantly in depot programmed equipment maintenance (DPEM) and second destination transportation (SDT). We have realigned DPEM funds to support the war effort; this at the expense of other depot maintenance requirements. The DPEM backlog at the end of fiscal year 1990 was $192.2 million; as of December 31, 1990 the backlog was $276.6 million. Our SDT account is currently "broken" and is being supported by borrowing from 4th quarter operating funds. We expect the supplementals passed by Congress to provide sufficient funding to substantially offset these accounts.

In addition to the reduction-in-force of industrially funded personnel this year, the draw down of our O&M civilian work force continues. In AFLC, a total hiring freeze is planned for fiscal year 1992.

Our concerns with fiscal year 1992 O&M funding are well founded since the 92 O&M budget request is substantially smaller than the fiscal year 1991 budget we currently have (Chart 3). The AFLC work force is planned to decrease by 22.5 percent from fiscal year 1989 through fiscal year 1995 in response to the changes in the national security environment, the down sized forces and flying hours, and the various DMRDs. Our fiscal year 1992 budget assumes a reduction in O&M/Stock Fund civilian end strength of 3,082 positions between fiscal year 1991 and fiscal year 1992. Unfortunately, the fiscal year 1992 President's budget is not adequate to finance AFLC's projected O&M and Stock Funded personnel as currently structured. Financing draws down faster than we can attrit personnel without adverse action. The Air Staff is aware of this problem and is working it. An early retirement plan is being considered and adverse action would be considered only as a last resort.

CHART 3

AFLC O&M/STOCK FUND
(CONSTANT 92$)



STOCK FUND SUPPORT

The Air Force Stock Fund (AFSF) continues to be in a state of transition. In addition to the General Support Division (GSD), System Support Division (SSD) and Fuels Division, the stock fund now includes two new divisions: the Reparable Support Division (RSD) and the Cost of Operations Division (COD).

The two new Air Force stock fund divisions (RSD and COD) were created at the beginning of fiscal year 1991 as part of the DMRD process. The Reparable Support Division now funds replenishment spares, line replaceable units, shop replaceable units, and other centrally procured items which were previously financed by the central procurement appropriation. The spares included in the RSD include the depot level reparables which support essential Air Force operations. RSD sales will begin the third quarter of fiscal year 1992. Additionally, the RSD will transition to the Defense Business Operations Fund (DBOF) in fiscal year 1992.

Under the RSD, as spares are delivered or repaired, these assets will be capitalized into the stock fund and then sold to the activities using the spares. The entire request in fiscal year 1992 for repair of the spares assemblies, including depot level reparables, is incorporated in the Stock Fund. The dollars used by the MAJCOMs to purchase items from the Stock Fund are appropriated in the Operations and Maintenance accounts of the stock fund's customers.

This RSD includes funding for aircraft spares and communications/electronics systems. Additionally, depot level reparable War Reserve Materiels (WRM) such as those used to support Desert Shield/Storm operations will, in the future, be funded through this division of the Stock Fund. In fact, our success in Desert Shield/Storm was largely due to the strong funding received for aircraft War Readiness Spares Kits/Base Level Self-sufficiency Spares (WRSK/BLSS) from 1984 through 1987. While funding was reduced significantly in fiscal year 1988 and fiscal year 1989 (47 percent and 20 percent, respectively), the impact on Desert Shield/Storm operations for most systems was not critical because our total spares posture was healthy. Selected weapon systems, such as the F-15E, did experience degraded support due to inadequate funding. These shortfalls were overcome by robusting WRSK through cannibalization prior to unit deployment and by surging depot repair of exchangeables. If hostilities had been extended, adequate support would have been jeopardized.

Future support to the fleet will be impacted by the fiscal year 1991 Authorization and Appropriation Acts which deleted all WRM funding ($373 million). Congress' rationale for the cut was concern over inventory growth. This approach does not consider two issues. First, WRM funding supports new systems entering the inventory (e.g., the F-15E, the C-17, the MC/AC-130) and also provides the necessary funds to support ongoing modifications of existing aircraft. Additionally, the provision didn't consider that inventory growth is not caused by expenditure of funds on unneeded items; it is caused by the addition of WRM to support new and modified systems. These required items are added to already existing stocks which support older, stable systems.

Because of fiscal year 1991 funding, we project a loss of several thousand sorties in fiscal year 1993. This impacts overall readiness and sustainability levels for tactical aircraft, strategic and tactical airlift, and Special Operations Forces/Combat Rescue missions. Our requested funding of $400.3 million for fiscal year 1992 supports only 34 percent of that year's requirement while fiscal year 1993 funding provides for only 15 percent of our projected needs. Requested levels provide only minimal levels required to provide a modest baseline for maintaining important Air Force capability into the 1990s.

Beginning in fiscal year 1992, the WRM request will be included in the DBOF. Following congressional guidance, the WRM appropriation will factor heavily into our overall stock fund cash flow. Failure to appropriate adequate WRM funding will hurt sustainability and seriously damage the health of the Stock Fund.

The COD is used to pay for activities previously financed from AFLC's O&M account. This division is unique in two ways. First, it is the only stock fund division which finances civilian personnel payroll, facilities, and other support costs. The COD includes the resources necessary to provide engineering and associated expertise, item management, cataloging and standardization, and other required support necessary to keep items available to our customers around the world.

Second, the COD has no sales. Initial operations began with a congressional appropriation to support fiscal year 1991 operations. Beginning in fiscal year 1992, the COD will be totally dependent on sales made by our System Support and Reparable Support Divisions. Financing for COD activities will be generated from a surcharge on sales made by the SSD or RSD to our customers. This is a radical change from the way we have previously operated. Sufficient sales to our customers (primarily operational MAJCOMs) must reimburse the SSD and RSD if we are to sustain the current level of AFLC operations. To efficiently operate this division, we need to avoid restrictions.

The fiscal year 1991 Authorization Act limits the service stock funds to an obligation authority of 80 percent of sales but provides for a Secretary of Defense waiver to the limitations. This restriction does not achieve its intended objective—reducing unneeded inventory. Instead, it defers the procurement and repair of needed inventory.

Funding for the fiscal year 1991 COD and for a major part of the fiscal year 1992 RSD requirements is by direct appropriation. In neither case are these costs reflected in division sales. Therefore, basing a stock fund obligation limit on fiscal years 1991-1992 sales will require severe cuts to acquisitions to ensure funds are available to perform essential repair and management services for the current inventory.

As an example of a consequence of this provision, during the first 4 months of fiscal year 1991 (until the Secretary of Defense implemented the waiver) we had only sufficient funding to meet payroll and to repair parts. This was because sufficient sales were not generated to provide adequate obligation authority to procure consumable or reparable items. Given the creation of the RSD and COD, this restriction would continue to create imbalances in our operating programs if it is renewed. These imbalances will impact personnel and our support to the operating commands. We strongly request Congress not mandate Stock Fund restrictions.

FUNDING FOR AIRCRAFT MODIFICATIONS

The Air Force modification program provides for the modification of in-service aircraft, training devices, and support equipment, but it also extends the service life of older systems and incorporates reliability/maintainability improvements after an aircraft has entered service. The objective is to keep our aircraft inventory in the most modern configuration.

Considering the fiscally constrained fiscal years 1992–1993 budget, funding for aircraft modifications is adequate and realistic. Modification priorities are established so that only those most essential are accomplished.

INFRASTRUCTURE PROGRAMS

Infrastructure accounts are split between the normal O&M funding as in prior years and the fully burdened stock funds created by the DMRD process. Our fiscal year 1992 infrastructure funds are well below our fiscal year 1991 level. Marks taken against the fiscal year 1992 O&M request are going to further complicate the ongoing problem AFLC has in keeping a "well-balanced" program. We recognize that future downsizing and the streamlining of AFLC operations will decrease the amount of services required; however, we cannot neglect basic support while we are reshaping the Command.

AFLC infrastructure funding is directly proportionate to efficiency and effectiveness in supporting the operating commands. One of these is the "Asset Capitalization Program" (ACP) which was started in fiscal year 1983 to modernize DOD industrial operations and to create an effective, well-equipped industrial complex.

The ACP allows AFLC to fund a wide variety of items: initial outfitting equipment for new maintenance facilities; off-the-shelf equipment in support of Repair Technology (REPTECH) efforts; state-of-the-art equipment to replace obsolete items; management information systems that give us the right data to support customer demands; 1-for-1 replacement for items that are not reparable; and minor construction funds to modify existing facilities or to provide additional small facilities to support workloads.

Since 1983, plant capitalization has been funded through the DMIF (fiscal years 1983–1989); ACP was terminated and funds were provided in the procurement account (fiscal years 1990–1991). Beginning in fiscal year 1992, the program (now called Capital Purchases Program) will be funded by the DMIF portion of the Defense Business Operations Fund; once again, more accurately charging the customer for the cost of doing business.

Although we fully support the return of the program to the DMIF, adequate funding remains imperative. Funding for the program was adequate up through fiscal year 1986 and allowed for significant replacement of worn and obsolete equipment. Unfortunately, since then, funding levels have been reduced annually. Current projections for fiscal years 1992–1993 indicate that we will be able to fund approximately 50 percent of our identified requirements. This level is inadequate to support our efforts to increase efficiency, decrease generation of hazardous waste, and still keep a technologically superior industrial capability.

Other programs critical to supporting our infrastructure are military construction and family housing. AFLC manages one of the larger physical plants in the Air Force. Based on initial investment adjusted to current day value, the replacement value of our real property holdings is almost $14 billion. Recognizing the age of our industrial facilities, the introductions of new technology and industrial processes, and the mission changes which we must continue to accommodate, we need to systematically attack our facility shortfalls and revitalization requirements through the Military Construction (MILCON) Program.

Our fiscal year 1992 MILCON request includes eight projects totaling approximately $65 million. This construction request includes improvements to the facility infrastructure, depot support for both current and new missions, and essential support facilities. We remain concerned with the need to revitalize AFLC's aging facilities. Each of the requested projects will contribute to either the efficiency or effectiveness of the logistics mission.

Discounting a $21 million facility required to provide embedded computer support to Space Command, this request is considerably less than the $100 million in current mission MILCON per year we require to sustain and revitalize our facility infrastructure. Thus far, we have been able to adjust to the diminishing Defense budget through the productivity enhancements realized from our MILCON investments during the 1980s. However, further reduction in MILCON funding will significantly prolong our revitalization effort, increasing the average age of our 87.9 million square foot facility inventory. The Department of Defense "MILCON Pause" in fiscal year 1993 reduces the AFLC MILCON to less than $26 million; $7.3 million for environmental requirements and $18.6 million for new mission workload (START and C-17). This pause in revitalization investments will compound our problem of sustaining a responsive facility base to support the depot functions at the Desert Shield/Storm level.

With respect to Real Property Maintenance by Contract (RPMC), we are about 50 percent (or $37 million) funded in fiscal year 1991. We need a minimum of $70 million this year to keep our facility infrastructure systems and buildings operating properly. As a result, we are rapidly approaching a point where we will be able to fix only that which is broken. This problem is compounded by the fiscal year 1992 funding outlook. After the must-pay items in the RPMA are satisfied, the fiscal year 1992 RPMC will be exhausted.

We place a high priority on the modernization of the AFLC military family housing inventory (about 6,700 units which average 30 years of age) in the interest of attracting and retaining a quality force. The fiscal year 1992 Family Housing Improvement/Construction Program request includes four AFLC projects at a total cost of $18.4 million. This request includes revitalization or replacement of 223 units at three bases and reflects a continuation of our efforts to attack, in a "whole house" fashion, revitalization of our aging quarters. This revitalization will upgrade the existing units to present day standards of livability while replacing deteriorating utility systems and enhancing energy efficiency. Additionally, this investment will help preclude a needless drain on the limited housing maintenance account. At Hill AFB, the fiscal year 1992 program proposes to replace 130 substandard housing units which are impacted by high aircraft noise levels and are in close proximity to the runway. The fiscal year 1993 Family Housing Program continues improvement projects at Kelly, Robins and Wright-Patterson AFBs (125 units, $8.8 million) and a replacement project at Hill AFB (82 units, $6.6 million).

Congressional support of our Family Housing Program in the past is appreciated. Unfortunately, at the investment rate for housing improvements, it will take over 25 years to complete renovation of AFLC's housing inventory.

An especially critical element of the Command's infrastructure is our computer systems. This modernization of our Logistics Management Systems (LMS) continues as one of my top priorities. Begun in 1982, the LMS Modernization Program continues today with one primary objective—to reorient AFLC's information systems from a purely mercantile focus to one of weapon systems supportability.

The LMS modernization is being accomplished as a series of discrete programs providing an incremental approach to modernization. This approach has allowed early phase-in of enhanced capabilities while, at the same time, improving opportunities to capture advances in technology.

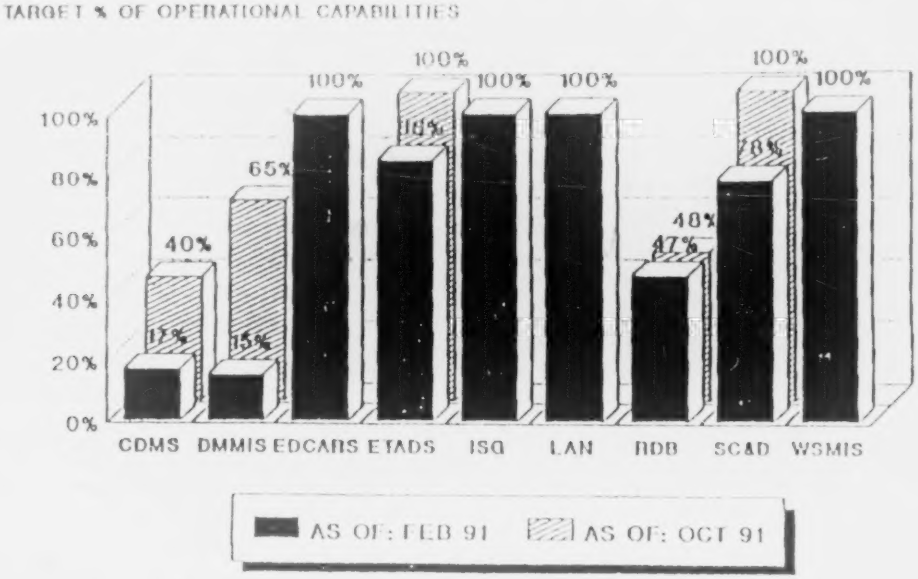
The core logistics functions of AFLC—Requirements, Acquisition, Distribution and Maintenance—provide the frame of reference for the LMS modernization. Each logistic process is equally critical. Support includes a relational data base that permits communication between the individual programs; automation of engineering data repositories; requirements calculation; automated assessment of readiness and sustainability indicators; on-line procurement information addressing the range of contracting functions; automated workload planning and skills/parts scheduling; in addition to better control of storage, allocation, and movement of inventories.

Nine major programs are included within the overall modernization effort. Each program undergoes formal milestone reviews at major acquisition and programmatic decision points. Each program or program increment is brought to operational status and its contribution verified as we move to subsequent programs or increments. Each program is also managed as an individual project and is in a different stage of acquisition and development.

All nine programs have achieved Initial Operating Capability (IOC), and four programs have achieved Full Operational Capability (FOC), with two more scheduled to reach FOC this fiscal year. The remaining three systems are expected to reach FOC by fiscal year 1994 (Chart 4). As previously discussed, several of these systems were instrumental in supporting Desert Shield/Storm. Even at IOC, two of the systems provided critical logistical support during the conflict.

Chart 4

LMS OPERATIONAL
CAPABILITIES



While the modernization program is improving Air Force readiness, it is also paying for itself in the process. This is in addition to the direct improvements in the core logistics functions, e.g., reduced order and ship times for weapon system repair parts which has significantly increased aircraft availability.

Funding for the LMS programs as presently contained in the fiscal year 1992 budget should allow continuation of these critical programs. Manpower reductions and other efficiencies are already reflected in the Future Year Defense Plan (FYDP).

ENVIRONMENTAL PROGRAMS

Environmental stewardship in AFLC is everyone's business; we have worked hard to institutionalize and fully integrate environmental concerns into the mainstream of our operations. We are proud of the progress we have made in cleaning up hazardous waste sites, improving compliance, and minimizing current waste generation. However, we recognize that an increasing level of resources is necessary to carry out our environmental responsibilities.

Our Installation Restoration Program (IRP) continues to be one of the best in DOD. In fiscal year 1991, we focused our attention on cleanup and closeout of our sites. We established a goal of 15 percent closeout by the end of fiscal year 1991 and 25 percent by the end of fiscal year 1992. Our outyear investment strategy reflects this bias for cleanup action. In fiscal year 1992 and fiscal year 1993, our Defense Environment Restoration Account (DERA) requirements will approach $250 million and $335 million, respectively, of which 70 percent is earmarked for cleanup.

We're challenging our people to work with the regulatory agencies to streamline the cleanup process and move aggressively to the cleanup stage at the earliest possible opportunity. For example, we recently signed an agreement with EPA Region 4 and the State of Georgia to expedite ongoing cleanup efforts at Robins AFB. This agreement will allow us to work with the regulators to minimize the paperwork and dead time associated with the cleanup process. Under the agreement, we will finalize a Record of Decision on one of our worst sites by the end of June 1991 instead of October 1991 as originally scheduled. We are proactively taking the lead at our other bases to initiate similar partnerships with regulatory agencies.

As our restoration efforts move further into cleanup, our DERA requirements will grow significantly. Historically, funding levels have kept pace with requirements—mainly because we were in the less expensive study phase. However, in fiscal year 1991 we already face a $60 million shortfall, and expect to see this shortfall increase in the coming years as we better define our required cleanup actions and identify the technology needed to accomplish these actions.

We will also experience severe shortfalls in O&M funding to meet environmental compliance requirements. Our O&M budget requirements for fiscal year 1992 and fiscal year 1993 are $100 million and $105 million respectively, while the projected corresponding funding levels are only $41.5 and $50.8 million. This differential in requirements emerged after the current budget was constructed. New regulations, increased scrutiny by regulators, and improved internal requirement identification methods increased the demand for compliance funding.

The projected budget shortfalls also do not take into account new and future legislation which will place additional compliance requirements on us. One specific example of this is the Clean Air Act Amendments of 1990 whose tougher emission standards and permitting requirements will have a significant impact on our budget requirements. For instance, the number of air toxics that must be monitored and controlled has increased from 10 to 189. This drastic increase includes many chemicals which AFLC currently uses in its daily business. The new Clean Air Act permitting scheme includes fees designed to pay all direct and indirect costs of state programs implemented under the new law. It will also have a significant impact on our cost of doing business. Together, this translates into expensive capital investments we will have to make over the next 3 to 5 years and higher annual O&M costs—which cannot be determined until the final rules are promulgated and compliance deadlines are set.

Consequently, the fiscal year 1992 and fiscal year 1993 O&M budgets do not allow us to fund initiatives that promote environmental enhancement and protection, such as waste minimization, pollution prevention, and natural/cultural/historic resource projects. Our budgets must grow to allow us to go "beyond compliance" to fully address our stewardship commitment.

We recognize that current hazardous waste generation must be reduced to limit future hazardous waste problems, disposal costs, and liabilities. As the generator of over 70 percent of the Air Force's hazardous waste, we have developed a strategy to focus on pollution at the source through hazardous material substitution, industrial process change, and recycling/reuse. Since 1985, we have invested over $40 million in process technology and equipment and have reduced the volume of hazardous waste we dispose of by 49 percent. We will far exceed DODs goal which is a 50 percent reduction by the end of 1992.

Despite this significant reduction in waste generation, our waste disposal bill has risen to $10 million this year and will continue to rise because of the rapidly escalating costs associated with more restrictive regulatory standards to dispose of hazardous waste. Furthermore, in striving for our ultimate goal of zero discharge of hazardous waste, the toughest challenges are still ahead of us. We are also expanding our efforts to the acquisition process to address pollution where it starts—in the design phase of new weapon systems. To this end, we have formed a partnership with the Aeronautical Systems Division to analyze the use of hazardous materials through the life cycle of the weapon system. Our goal is to eliminate the use of hazardous materials wherever possible in the design, production, and maintenance. It is likely that the technology development and application to achieve this goal will require a significant resource investment.

Investment in pollution prevention initiatives is extremely limited. While DERA has provided an avenue to fund hazardous waste minimization projects, DERA support has been sporadic and unreliable due to higher priority site cleanup requirements. We received no DERA funds for hazardous waste minimization in fiscal year 1990 and only $4.9 million in fiscal year 1991.

The Waste Minimization Capitalization Account (WMCA) provides us the impetus to continue our long-term minimization programs. The funding level for this program was set at not less than one half of 1 percent of fiscal year 1988 depot maintenance revenues which equates to $11 million for AFLC. We have programmed in excess of this amount for minimization expenditures in fiscal year 1992, and have already spent $7 million from depot maintenance funds for waste minimization in fiscal year 1990 and fiscal year 1991.

Waste minimization has been a priority concern and investment in our depot operations, but the full impact of the WMCA requires clarification. The legislation establishing this account does not appropriate funds to accommodate the required expenditure. Therefore, the mandated expenditure must come from increased rates on customer orders and compete for available capital purchase funds. Given the relatively fixed value of capital improvement dollars, we have been forced to cut back on some modernization efforts that could result in reduced services to our customers. The result is a tax on our ability to support the customer.

DEFENSE MANAGEMENT ISSUES

In addition to adequately financing logistics programs, we also need support from the Congress in the area of defense management. I've previously addressed the need for permanent relief in the area of civilian end strength ceilings; assistance is also required in the area of financial management.

For example, Public Laws 101-510 and 101-511 directed the closure of all lapsed fund or successor "M" appropriations. This closure is to take place, incrementally, between March 6 of this year and September 30, 1993. By that date all lapsed funds appropriations will have been closed and no further obligation or payment will be made against those appropriations. Within Air Force Logistics Command this involves $2.3 billion currently obligated on our contracts covering requirements for Air Force Logistics Command's and those of other services as well.

The Congress, in originally authorizing the successor "M" accounts, recognized that in the conduct of defense business, there are many occasions when upward adjustments to contract funding are necessary to provide for within scope increases to cover contingencies such as: adjustments for claims; escalation clause increases; changes in foreign currency rates; and the correction of accounting records. In the interest of meeting full funding requirements and to identify the total cost of a program or project, the Congress provided for these kinds of adjustments to be made from the original appropriation. The legislative changes enacted during the last session were based upon the perception that the amount of funds in a lapsed, but appropriated, status had become excessive and that there were occasions when lapsed funds were misapplied.

The Air Force Logistics Command is working very hard to comply with the fiscal year 1991 acts. However, we have a serious problem dealing with the aggressive time-phasing of the closure of the lapsed fund appropriations. Logistics Command has thousands of complex, multiple-year contracts whose funding has lapsed into the merged account. To comply with the acts, each of these contracts must be manually reviewed and appropriate actions taken. This is a difficult, time consuming process involving personnel from multiple functions at the Air Logistics Centers, DLA Contract Administration Offices, and the supporting Defense Contract Audit Agency offices. The mandated closure of several years of lapsed appropriations on March 6 did not allow sufficient time to complete this process. As a result, close to $200 million in closed appropriations has been lost and we will have to use current appropriations to satisfy valid government obligations as required by the statutes.

In the coming 3 fiscal years, the number of contracts, the level of funds subject to closure, and the complexity of the issues will rise substantially. I anticipate that we will have even greater difficulty in meeting the congressionally-mandated closure schedule for these years. Extending the availability of already obligated, lapsed funds until fiscal year 1995 would afford us much needed breathing room to adjust to this very significant change. Beyond the foregoing, a long-term solution dealing with the problem of contract closeout needs to be addressed. I am concerned that the funding of our long-term contracts cannot be reasonably accommodated within the restrictions imposed by the new law, and that such restrictions will cause serious disruption to both old and new programs.

Gentlemen, I appreciate your invitation to testify before this subcommittee. Thank you for your past support and I ask for your continued assistance in ensuring that sufficient funding and flexibility of management is available to meet future challenges in readiness, sustainability and support.

Senator DIXON. Thank you very much, General McDonald. May I say that Senator Levin will certainly be here. He is going to chair shortly. Senator Lott will be here in time, and I know my distinguished colleague the senior Senator from South Carolina has some questions. We have a series of questions regarding the defense industrial base and a variety of other things I would like to address to you both.

I wonder, General Tuttle, if I might visit with you a little bit about the recommendation that Secretary Cheney has sent to the base closure commission regarding the Rock Island Arsenal in my

State. I understand that part of that recommendation stems from your recommendations to the Secretary, and it would be very helpful if you would enlighten us. First of all, I am told, and incidentally I have been there of course many times, but my records indicate that the Army owns enough space on the Arsenal at Rock Island to expand operations at less cost, we believe, than at alternative sites such as Huntsville.

The Island consists of 950 acres, of which only 400 are now developed. My report at hand states there is 280,000 square feet right now of unused industrial space, 130,000 square feet of available office space, 400,000 square feet that could be renovated for office space. I guess I would ask you first of all, General Tuttle, is that in accordance with your understanding about the space available?

General TUTTLE. Certainly we understand that. As you know, what has been behind the effort that led to the base realignments is the rather significant reduction in the size of defense forces. I mentioned just through 1993 significant decreases in what we project to be our manpower in the Army Materiel Command. That reduction continues throughout the period of the POM through the mid-1990s as the Army downsizes. We were faced with a dilemma, of course, of continuing the cuts. We have come from about 105,000 civilians now down to about 91,000 permanents, about 5,000 temporaries, but continuing down, we think somewhere in the vicinity of 70,000. So that is a fairly significant drop in the overall structure.

The alternatives are to continue to salami slice in place, which means since you have to have a minimum number of people to operate your bases that you start taking them out of workers, and that effects the readiness of the forces significantly. We thought that was not a logical option. We therefore, starting about a year ago, decided to look at alternatives, and the alternatives are what has been popularized, or as will be called Vision 2000, which I know was leaked, but this was a necessary consequence of having a lot of people involved in it so we did not do something stupid.

So we constructed a new structure, if you will. Part of that structure has been approved, and that is the creation of an Industrial Operations Command which combines like activities, i.e. the operation of our organic industrial base, the depots, the arsenals, the ammunition plants, into one command, which is going to be at Rock Island. Rock Island already, as you know, operates the three arsenals, the ammunition plants. We are adding the depot maintenance headquarters activity.

Senator DIXON. You will transfer the Depot Systems Command from Letterkenney to Rock Island, as I understand it. That is a plus, of course.

General TUTTLE. If we were to do just that, what we would have is a command with two different kinds of activities on its base, and that is the materiel management of the armament, of the guns that we have, which is the part of the Armament, Munitions and Chemical Command that is also located there and the depot maintenance activities. That would make just a terrible command and control situation, a confusing one. And so what we decided to do was to consolidate our national inventory control points, or Materiel Management Center at Rock Island, with the one at Redstone. So that will bring us, along with the consolidation we are making at St. Louis, from six inventory control points to four. And so we are part way along with what we have committed to the Department of Defense in the Defense Management Review Directives.

Senator DIXON. If I could pursue that, what you are in effect doing is putting all the depot system command at Rock Island, but you are moving the Armament, Munitions and Chemical Command from the Rock Island Arsenal to Redstone?

General TUTTLE. No, sir, that is not accurate. What we are doing is taking a piece of the Armament, Munitions and Chemical Command. There are really four pieces located at Rock Island. First, of course, is the base operations for the whole structure. Second is the operation of the arsenal itself. Third is the operation of the single manager of conventional ammunition. Now that stays there, along with the ammunition plant operation. And then the piece we are moving is the fourth one, which is the materiel management, the buying of the repair parts, the overseeing of depot maintenance for the guns, howitzers, and so forth that we have in the field.

Senator DIXON. That will be transferred to Redstone?

General TUTTLE. Yes, sir.

Senator DIXON. Let me ask you about existing space down there. The information at hand is—now frankly I understand that Vision 2000, the ambitious entire program is not going to be in place right now.

General TUTTLE. That is correct.

Senator DIXON. My understanding is that Vision 2000 has about a $2.5 billion price tag on it. Is that correct or is that an overambitious suggestion by somebody?

General TUTTLE. That is about $1 billion high. I think the whole thing, we estimated as somewhere around $1.5 billion, including construction and severance pay.

Senator DIXON. Would the $1.5 billion include new construction at Redstone to accommodate the folks being transferred there from Rock Island and other places?

General TUTTLE. Not the initial increment, or not this increment that has been approved. I will put it that way. For the increment that has been approved, there will be sufficient space at Redstone to transfer these people in. One thing we must also keep in mind, it seems to me, is that we are going through a continuing attrition process as we go through the 1990s. So far the information from Members of Congress mentions about 1,480 or so people to be transferred. I think you could probably discount that by somewhere around 30 to 33 percent, my guess is, by the time it actually happens. So what happens is the people at Redstone are also coming down. The number of people at Rock Island is coming down. So we do not think there is going to be a problem of fitting the people in Redstone Arsenal.

Senator DIXON. Now the whole program, what you referred to as AMC Vision 2000, that will draw from all over the country as I understand it, bring it all into Redstone. Is that ultimately the game plan?

General TUTTLE. It is hard to answer that, sir. The Army has approved the piece of it which was sent by Secretary Cheney to the Commission.

Senator DIXON. Of course it now becomes the responsibility of the Base Closure Commission, those eight members that have been confirmed by this committee and the U.S. Senate to review that. And as you and I both know, they have the alteration authority, they can add to or subtract from the list. They also deal with the General Accounting Office to determine cost effectiveness. And thereafter, of course, the President has the right to review that list, he can make suggested alterations, as I understand it. When I say understand it, it is my bill, and I certainly know that to be the fact. Ultimately the Congress then approves or rejects the list. Have you considered the cost effective nature of the suggestions and recommendations you have made?

General TUTTLE. Yes, sir, we have. We have each piece of it. I personally briefed the Secretary of the Army and the Chief of Staff. We have about a three volume piece of work that went into the cost effectiveness, discounted present value, all the typical investment decisions. Now obviously these are estimates of costs and estimates of savings, and have some degree of error that is associated with any kinds of estimating. But they are the best we can get. And those that have gone forward are those that I think we are much more confident of. They have nearer term benefits than those that were not approved, and I suspect that is why, in fact I know that is why the others were not approved at this time.

Senator DIXON. Let me ask you this. You know, industry is learning that the value of concurrent engineering, which has design and production engineers working together during development, has been of proven value to them. Did you consider that, General, the value of having all weapons experts from design to logistics located with the Army's largest weapons manufacturing arsenal at Rock Island? Was that a matter that you——

General TUTTLE. The arsenal manufactures a very limited number of our systems. The M-119 Howitzer, for example, is the only one being manufactured there now. It does some repair, and it manufactures some gun mounts, as you know, for the tank. That is a very small number of people. So we obviously considered that. We believe in the concept of concurrent engineering.

One of the reasons that we have been moving toward the Vision 2000 is just the argument that you are making. We would like to have the logistics people, the design engineers, those who have influence on the design, to be located as closely together as possible. As you know, right now the Research and Development Engineering Center to support the Armament, Munitions and Chemical Command at Rock Island, is located at Picatinny, New Jersey, you know, half the country apart. And that creates major problems in both the design of systems and their logistics support.

So one of our objectives in the whole Vision 2000 had been to eventually bring as much of that together as was possible. We have it together, for example, for the missile systems already at Redstone. There the engineers and the logistics support specialists, those most concerned with overseeing the contractors' design efforts, are co-located together, and it makes the systems much easier to bring together.

Senator DIXON. General, you suggested a realignment savings of about $66 million in the base closure report in connection with this transfer. Is that figure in connection with the transfer from Rock Island to Redstone, or is that the overall figure from transfers around the country? I am not clear on that.

General TUTTLE. It is the overall dollars associated with that particular set of transfers. In other words, by bringing the Depot Systems Command and the supporting automation people in our automation management office there that is also located at Letterkenney together with the managers of the arsenals and the ammunition plants, we will save overhead. We will then save another increment of overhead down at Redstone as we bring out the resource managers and the overhead that support the people doing materiel management, and bring those together. We will save again.

Senator DIXON. Well now, frankly, General, what I would appreciate, if you would be so kind as to accommodate this Senator and others who are concerned, and of course there will be a long process, I am sure you understand we will all be in different kinds of public hearings on this because the act clearly provides that public hearings are allowed, and I am sure all of us agree with that concept. We want everybody to have their opportunity to be heard.

If you would be kind enough to, in some degree of specificity for my staff here in this subcommittee, show us what you contend the savings are on that limited amount of the transfer with respect to Rock Island Arsenal to Redstone; how you isolate that cost savings and what you attribute it to. And also if you could accommodate us with respect to our assertion that there will be new building obligations at the other end to accommodate these people, so we can evaluate all that, at some point in time.

Civic leaders in the areas, you would readily understand from the quad cities, want to be heard, and we would like to do an analysis of this and have our people put their sharp pencils to it and make the best case we understand that we can make. And of course with all due respect to you and your doing your job, and I do respect that, I have the highest personal regard for you, we will want to try to make our case about Rock Island, which is a very formidable installation in my State and one that we think is producing first rate work for our Nation in times of crisis.

I thank you for your accommodation. My friend the Senator from Michigan has been kind enough to indicate he would chair for me. I have to return to the Senate floor, and I am going to yield to him. I thank you very much for your responses to my questions.

[The information follows:]

The Base Realignment and Closure Commission (BRAC) process utilizes a computer model for estimating the costs and savings related to transfer of functions from one installation to another. That computer model (Closure and Base Realignment Analysis COBRA) determines the costs of relocating people, construction costs of required facilities, and base operations costs needed to support the additional people. A copy of the costs and savings related to the Rock Island to Redstone transfer follows:

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                 REALIGNMENT SUMMARY (COBRA Ver 1.23)
             AMCCOM(-) to Redstone Arsenal to form ICP

Option NPV20          ($K) :  -152243     Losing Base    : ROCK ISLAND
Total One-Time Cost ($K) :    76761     Group          : AMC
Years to Break Even        :        6     Service        : US Army
ROI Years                  :        0     Option Package : AMCCOM

Strategy                   :        1     Baseline Year  : 1991
(1-Transfer, 2-Close, 3-Deactivate)

                       Net Cost  ($K)    Constant Dollars

              Year1     Year2     Year3     Year4     Year5     Year6    Beyond
              1992      1993      1994      1995      1996      1997
            -------   -------   -------   -------   -------   -------  --------
Mission           0         0         0         0         0         0         0
Personnel         0         0         0     -6247    -17747    -28509    -34022
Overhead          0         0         0         0     -1429     -4763     -4763
Construct      2663         0      7850     16056     11774         0         0
Moving            0         0         0      5567     14629      7655         0
Other          1025      1025      1025      3076      2323      2094         0

NET            3688      1025      8875     18451      9550    -23523    -38785

NOTES:     Negative numbers are net savings
           Positive numbers are net costs

           The savings associated with this realignment are also included in Defense
       Management Report Decision (DMRD) 926.  In order to implement this DMRD, it must
       be approved by the Commission on Base Closure and Realignment.
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Senator LEVIN [presiding]. Senator Thurmond.

Senator THURMOND. Thank you, Mr. Chairman. This question is for General Tuttle and General McDonald. Gentlemen, I am told that both your commands' budgets were cut on the assumption of DMR savings. I understand that these savings were assumed prior to the implementation of the specific DMR program. Based on your experience to date, have you been able to achieve those savings projected in the DMR program? And if you cannot achieve the projected savings, what recourse do you have to ensure continued support to the forces in the field? General Tuttle, would you answer first.

General TUTTLE. All right, sir. The Defense Management Review changes are just now being implemented, so there really has been no opportunity to see if savings are there. Of course the savings are estimated, as you well understand. We make changes based on estimated returns. I believe the system is flexible enough for us to monitor the effects of those adjustments and to adjust as we go along as the Department of Defense sends budgets to the Hill. And I believe that would be reflected. I do not think anyone intends to do something that is dumb in this case.

There are some ambitious estimates being made, but at the same time the Defense Department is coming down and there are opportunities to make major management savings. With that we agree, such as the consolidation of our area-oriented distribution depots into the Defense Logistics Agency, which I personally supported and in fact even initiated before the Defense Management Review was published. So I think it remains to be seen.

We are confident, we will work very hard to get there. We are working together, as General McDonald and I both mentioned, in the Defense Depot Maintenance Council. We think there are real opportunities there to improve the efficiency with which we accomplish our tasks. So I believe that we should wait until the results come before we prejudge.

Senator THURMOND. General McDonald.

General McDONALD. I would just amplify what General Tuttle has said. That is, we do not know at this point in time whether those savings are achievable or not. We are signed up to, however, try to make them real. And some of the things that I talked about in my opening statement number among those things where we are changing our management, we are changing our process, and we are changing the size of our overhead bill. That is one way efficiencies in the depot I think are always possible, and we will work very hard to make sure we identify those. We have additional impetus now to do that.

Finally I would say that we in the Defense Depot Maintenance Council have made some enormous improvements in terms of capacity measurement, computing on a common basis of cost what allowable costs are permissible in a competitive environment. We have defined the core maintenance activities I think better than we ever have before and we have agreement on those things. So there are some very positive things that are coming out of that particular defense management report.

I would say that at this moment the target that has been set for savings in the name of competition is very ambitious, and both General Tuttle and I are concerned about that. We have, we think, identified about half of that as an opportunity so far, and we are working hard through interservicing as well as competition to work the other half of it. So, yes, it is difficult in some areas. It is certainly ambitious. But we support the process and we believe in the main, at this moment, that those savings can be achieved.

Senator THURMOND. General McDonald, you indicate that you expect to run out of engine overhaul money before the fourth quarter of fiscal year 1991 unless additional funds are made available. Are these funds included in the supplemental appropriation request for Operation Desert Storm? If not, when can we expect a request for these additional funds?

General McDONALD. At the moment, depending on how the funds are actually distributed by the Department of Defense, the total amount for engine overhaul required for the rest of the year, including the costs already incurred, are included in the supplemental.

Senator THURMOND. General Tuttle, as you point out in your statement, the maintenance support for Operation Desert Shield/Storm required a total effort from both your command and the contractor community. Could you provide us the number of contractor personnel in Saudi Arabia to support Army weapons systems? Also, could the Army have accomplished its mission without these personnel?

General TUTTLE. We had at various times, I think the maximum was somewhere around 1,200 contractor personnel. We are down slightly now. The answer is many of our aviation systems were still under interim contractor support. We had not brought the overhaul or the maintenance of their major components into the organic structure. And so the answer is we would not have been able to sustain the systems, in my belief, without that contractor support for those most modern systems. But it was given readily. There was never a problem. Contractor personnel were as responsive as one could have hoped for.

Senator THURMOND. General McDonald, it is very apparent that the Air Force Logistics Command provided timely and critical support to the Air Force units deployed to the Persian Gulf. Are you confident that these units would have received the same quality of support had DMRD 902, the consolidation of supply depots, already been implemented?

General McDONALD. I believe the answer to that is yes and let me give you some reasons why I think that is true. First of all, the people that we will begin transferring next week to the Defense Logistics Agency are the very same people who are accomplishing that task now. They will be accomplishing that task in the future. Also in our distribution activities, through the introduction of a new management system called Stock Control and Distribution, we have the best visibility on where things are in the system today than we have ever had. And indeed we used that and amplified it's basic capabilities during Desert Storm and Desert Shield.

The one area of concern that I have had continuously with 902, and I still have a concern with it, is how we integrate the various management information systems that we have in the Air Force, with that of the Army, the Navy, the Marine Corps, and the Defense Logistics Agency to meet all of the needs that I expect. But since it is going to be based, we believe at this moment, on the Stock Control and Distribution core activity management system, I believe we will get that service. I will demand we get that service.

Moreover, we have just completed a master memorandum of understanding with the Defense Logistics Agency and in that I have indicated to General McCausland exactly what I expect the agency to do. We will, in effect, hold their feet to the fire.

Senator THURMOND. General Tuttle, I understand that Sharp Army Depot was to transfer to the Defense Logistics Agency in July 1990. Although it has been less than a year since the transfer, do you have any lessons learned as a result of the transfer?

General TUTTLE. Not really. It was part of the bay area test, and so what I think the Defense Logistics Agency has been doing is trying to adjust the operations using that as a prototype with its other facilities in the bay area. The support has not reduced. I mean, we have seen no degradation in support, which is the way I look at it now. Since it is not my activity, I am concerned about the degree of support, particularly the forces in Korea I have. But it remains just very, very good. I have not seen any problem there. I know they are trying to reconcile the savings, what overheads they can merge together. That looks like an activity that will continue here for some months, and I suspect they will achieve most of the objectives that they have sought in that.

Senator THURMOND. General McDonald, as you pointed out in your statement, the C-141s were used extensively during Operation Desert Shield/Storm. Since the aircraft already had aging problems such as wing cracks, what impact did Operation Desert Storm have on the remaining service life of the C-141s?

General McDONALD. I believe it had a significant impact, because every one of those hours that was flown during Desert Storm over and above our peacetime operating rates clearly impact the service life. One mitigating factor in that regard, the kinds of missions we were flying, the long duration missions rather than some of the specialized operations that C-141s do, put less demand on the air frame. So we discount those in our formula. But on balance there is a significant shortening of the C-141 life as a result of Desert Storm and Desert Shield.

We will accommodate that in our increased inspections. We have several areas, several technical compliance technical orders that address wing cracks, fuselage cracks, landing gear problems, and the like. So as the aircraft now go through depot overhaul we will take care of all of those things. We had to defer some C-141s from programmed depot maintenance during Desert Storm. We are in the process of getting back to the regular schedule at the moment. But I think this simply bolsters our Air Force case for the C-17.

Senator THURMOND. General Tuttle, the decline in our ammunition manufacturing base continually surfaces as a major problem. During Operation Desert Storm did you have to procure any ammunition from overseas producers? If so, what type and why?

General TUTTLE. We procured some of the 120 millimeter tank ammunition, the M-830 round, which is the chemical energy shaped charge round, from Germany to bolster our supplies a bit, sort of as an insurance policy, I would say. We have ongoing production, of course, in the United States, but we felt better by having more there, especially since VII Corps was committed to go down and we did not know what the usage would be.

We also made an attempt to buy some 25 millimeter from the Dutch, because as we went into the conflict our discarding SABOT rounds, the 25 millimeter which the Bradley shoots, we were in the process of modernizing the rounds. We had stopped, or were phasing down the old type round and were gearing up production just starting, in fact it just started this spring, on the new type round. So we had elected, taken a little bit of a risk, I am sure, not to buy the full amount of inventory that we would have otherwise done. The Dutch ammunition did not turn out to be very helpful. It is a different type of round. But we still had more than 30 days worth for the full force over there, computed at I would say excessively liberal rates. And of course we used hardly any of it.

INDUSTRIAL BASE

Senator THURMOND. General Tuttle, there is a great deal of concern that our defense production base is disappearing, especially at the subcontractor level. Has your command experienced any problems during Operation Desert Storm due to the lack of available supplies?

General TUTTLE. No, sir, we did not. We did a lot of phone calling and jaw boning and helping primes and second tier contractors, and we did a lot of work. But I will tell you the contractors came through in extraordinary fashion, even though it is a very lean base and, as the Joint Chiefs of Staff assessment indicated for this year, there is a declining sub-tier base and we are quite aware of it. Nevertheless, when they were needed they were there. What will happen in the future is what our industrial base assessment is trying to find out now. The assessment has been going on since about November of last year, and we hope to have some better answers in very specific detail on specific systems by the fall.

Senator THURMOND. Thank you, gentlemen, for your presence, and we appreciate your fine testimony. Mr. Chairman, I have no further questions.

Senator LEVIN. Thank you, Senator Thurmond. Welcome to both of you. I want to pick up where Senator Dixon left off on Vision 2000. As I understand your testimony, General Tuttle, you have indicated that those portions of Vision 2000 which were found to be cost effective were included in the base closure and realignment report that the DOD recently forwarded to the commission. Is that correct?

General TUTTLE. Yes, sir, that is correct.

Senator LEVIN. And those areas which were impacted by that recommendation, of course as Senator Dixon indicated, will be free to press their case before the base closure commission?

General TUTTLE. Yes, sir.

Senator LEVIN. Now for those portions of Vision 2000 which were not included in the base closure and realignment recommendation, does that represent the judgment of the Army, then, that they were not cost effective at this time?

General TUTTLE. That is correct, sir. The cost of implementing those additional actions in those packages which were not included was more than the Army could see. On the other hand, there was a real return on investment from doing it, from simply consolidating like activities together as we downsize.

Senator LEVIN. The particular facility, of course, that I am most familiar with is the Tank Automotive Command in Warren that was not included. Does that mean that it was the Army's judgment that it was not cost effective and is not cost effective to realign that at this time?

General TUTTLE. Yes, sir, that is correct.

Senator LEVIN. Does the Army Materiel Command or the leadership of the Army have any plans or intentions to close or realign any Army Materiel Command facilities other than those that were included in that base closure recommendation?

General TUTTLE. No. We are of course bound by title V, section 2687, and we follow that scrupulously.

Senator LEVIN. But you have no plans now for any future years recommendations that you have at this time?

General TUTTLE. No. I must tell you, though, that as we continue to look at downsizing and as we face the unhealthy prospect of having more and more of our resources going to operating bases rather than to the readiness of our forces, that no responsible commander could avoid bringing up once again other alternatives which would indicate a more effective and efficient way of operating this command. I will not preclude the further consideration of those same options, sir.

Senator LEVIN. But at this time you have no plan or intention to proceed?

General TUTTLE. Yes, sir. We have made our presentation to the Secretary, and the decision was that at this time, as you said, they were not cost effective. And those that were considered so were forwarded to the Commission.

Senator LEVIN. My specific question is do you have any plan or intention to propose next year the specific closing of other facilities?

General TUTTLE. No, sir, I do not now.

Senator LEVIN. That you will in the next plan be proposing certain——

General TUTTLE. No, sir, I do not know now if we will propose this for the 1993 round.

Senator LEVIN. And everything you view as being cost effective now is included in this year's plan?

General TUTTLE. The proposals that were viewed to be cost effective in terms of return as well as investment required are included in this one.

Senator LEVIN. That is what I was driving at. What is the test for cost effectiveness? Is it pay back by a certain year?

General TUTTLE. Basically that appears to be the criteria that was used. The earlier pay back options that were offered are those that were taken, and also those that require fairly minimum up front investment costs given the size of the budgets that we face in the next several years.

Senator LEVIN. What was the pay back year that was used, do you know, by the Army? How many years would the investment have to be paid back in order that it be included in this year's proposal?

General TUTTLE. I do not know of a particular hurdle rate, because there are various break even years among the packages.

Senator LEVIN. What is the outside?

General TUTTLE. The outside one that I have seen is about 2002, or thereabouts.

Senator LEVIN. Do you know the largest up front cost of any of the packages?

General TUTTLE. I believe—no, sir, I do not have it right now. I thought I had. One of our packages is a fairly significant one, and it is about $230 million, and that is over the realignment of the laboratories.

Senator LEVIN. Could that one maybe be the largest one?

General TUTTLE. I believe it may well be, sir.

Senator LEVIN. Let me turn now to the Persian Gulf war. First on the service life question of the C-141, is there going to be an estimate of the loss to us or the cost of the shortened life of the C-141? Are you in the process of estimating that now?

General MCDONALD. We are doing exactly that, Senator. It is premature for me to comment, except what I said earlier, since we do not have any hard numbers at this moment. But clearly it will have an impact. And the way we will accommodate that in the near term of course is by accelerating some of our maintenance requirements. For the longer term it is a different question.

Senator LEVIN. So you are now currently estimating a specific dollar cost to us in the loss in the service life of that aircraft?

General MCDONALD. Yes, sir.

Senator LEVIN. Do you know if that is being done for all the other weapons that we were using and equipment that was being used?

General McDONALD. I do not believe so. This is the most pertinent case. It is less evident in the case of the C–5, although clearly we used up 2 years worth of flying time, and presumably 2 years of service life in the 6 month period in the case of the C–5.

Senator LEVIN. The reason I am pressing on this is that when we see estimates of the cost of the war we do not yet have an estimate of this type of cost, which is a real cost. And some of our allies who have contributed are looking at a very narrow cost and saying gee, you may get back from your allies almost as much as it quote, "cost you." But the quote, "it cost you" figure does not include the wear and tear on all of our equipment.

General McDONALD. Precisely.

Senator LEVIN. So at least in this one instance you are going to be estimating what that wear and tear is, but you are not sure as to whether on other equipment and weapons systems that is being done?

General McDONALD. At this moment I could provide a more precise answer for the record.

[The information follows:]

The C–5A/B flew approximately 3.5 times the number of hours during Desert Shield/Storm as would have been flown during the same period in peacetime. However, due to the nature of mission profile flown, the C–5 had a severity factor of less than the normal peacetime factor. Therefore, the service life impact to the C–5 fleet as a result of Desert Shield/Storm operations is only the additional hours flown.

Approximately 25 percent of the C–130 fleet was deployed in support of Desert Shield/Storm. They flew on an average four times their peacetime rate of 1½ hours/day. Systems to monitor the C–130 service life and account for individual aircraft usage are used to assess flight profiles and their impacts. As C–130 aircraft return from Desert Storm and enter into scheduled Programmed Depot Maintenance (PDM), an Analytical Condition Inspection (ACI) will be accomplished. AFLC engineers will further develop a Desert Storm usage profile. Initial PDM inputs have begun and C–130 engineers are evaluating observed Desert Storm impact. The increased usage associated with Desert Storm did impact service life of C–130 aircraft but the exact amount has not been quantified at this time. However, initial assessment of service life and Desert Storm impact indicates that life extension modifications, such as the new center wing currently being installed on the Special Operation Force (SOF) may need to be installed on additional C–130 aircraft.

We project the increased operating tempo will have minimal impact on the expected service life of strategic aircraft (B–52G, KC–10, and C/KC–135). The major factors affecting B–52G service life during peacetime are the number of takeoffs/landings and low-level training. Desert Storm sorties flown by B–52Gs were of longer duration, with fewer takeoffs and landings, and without low-level operations, so little impact is anticipated. KC–10s flew many maximum gross weight missions and there was some additional wear and tear, but aircraft/engine depot maintenance was continued and the SPM expects no degradation in airframe service life. C/KC–135 aircraft accumulated approximately 4 years of normal usage during Desert Shield/Storm which will have a minimal effect on service life projections. To a larger extent, service life of the C/KC–135s is affected by factors such as corrosion and modification/demodification of airframes and we expect no impact on service life as a result of these factors.

With respect to airframe life impacts on tactical systems involved in Desert Storm, they vary with weapon system. In general there should not be any major shortening of airframe life on most of the systems. Although the aircraft involved flew significantly higher sortie rates, the duration of the war was very short. Even assuming a sortie rate of five or six times the peacetime rate, we would only shorten the life span of a typical aircraft by 6 to 12 months.

Another factor which comes into play is the fact that in many cases the aircraft tasked represents only a portion of the total fleet and some of the aircraft are already being planned for phaseout. A good example is the A–10 which is currently scheduled for phaseout of part of the fleet over the next several years. In terms of actual airframe life, the A–10 is good until 2010. Because of this, it is very likely that the aircraft will be retired from the inventory before the airframe service life is expended. The F-111 is a similar situation. In terms of airframe life, the aircraft can probably operate significantly past the year 2000, although the aircraft will be in a phaseout mode prior to that time.

In terms of some of the more modern aircraft such as the F-15, we see no major impacts. In fact, some information leads us to believe that in the case of the F-15A/D models (which performed the air superiority role), there may be an increase in service life. The reason is that the aircraft undergoes greater stress during training exercises than it did in the "no fight" environment during Desert Storm. In the case of the F-15E (which performed in the air-to-ground role), System Program Manager (SPM) personnel estimate the aircraft's projected service life of 18 years was decreased by 1 year.

Another factor that must be considered is airframe service life is not absolute. It is an estimate which is projected based on anticipated stress generated for a specific flying profile. The Air Force has, on numerous occasions, undertaken programs to extend airframe life. Although it is unlikely that it will be required due to Desert Storm, it remains an option.

The only tactical aircraft which may require a closer look regarding effects of Desert Shield is the F-117. Since the majority of the fleet was involved and flew a very heavy tasking, we need to look at this aircraft carefully. This is particularly true in light of its unique capabilities and its importance to the Air Force mission.

Based on inspection of returned engines from fixed wing aircraft and actual operating experience, no unusual trends or abnormal reasons for removal were apparent due to Desert Shield/Storm. The higher flying hour program resulted in a greater number of engine removals but was still consistent with normal removal rates.

Engines on rotary-wing aircraft (e.g., the T-64 and T-700 helicopter engines) did incur problems which significantly increased their expected removal rates. The T-64 removal time decreased to less than 200 hours versus an original 500-600 hours. The T-700 time between removal decreased from 1,500-100 hours. Both engines suffered from major loss in power induced by problems such as severe sand erosion to the compressor, distressed turbine parts, and sand building up on engine surfaces and cooling passages. Problems related to these engines were caused by the environment due to low-level operations and operating over unprepared surfaces. Engine service life was not affected; however, depot workload increased in fiscal year 1991 due to an increase in engine overhauls. We expect the cost to even itself out in the long run as the number of engines overhauled return to normal.

Senator LEVIN. My time is up. Senator Shelby.

Senator SHELBY. Thank you, Mr. Chairman. General Tuttle, it is good to be here with you and General McDonald. You used the word, or maybe I picked it up, ongoing. Internally in the Army and the Air Force there will be ongoing studies that you may or may not, or your successor, whoever, may or may not recommend regarding another day. In other words, the 1993 round of base closings and so forth, because as you shrink you are going to continue to make decisions all over the United States and world. Is that right?

General TUTTLE. That is correct.

Senator SHELBY. So you are not precluding anything in the future by what you recommended? It is what you are doing as of this base closing time. Is that correct?

General TUTTLE. That is correct.

Senator SHELBY. As far as Vision 2000 is concerned, although that is not all worked out yet, as you shrink forces and as strategy drives a lot of this, and world politics, those decisions regarding facilities in the United States, labs, bases, and so forth, will be, to use the phrase again, ongoing?

General TUTTLE. Yes, sir. In our view they must be. As I mentioned in answer to Senator Levin's question, the alternative for us is to have about half of our people in the base operations and overhead business and the other half working, which is probably intolerable.

Senator SHELBY. General, it is my understanding, and you are familiar with this, General Tuttle, that over 250 employees of the Anniston Army Depot which is in my State were deployed to Saudi Arabia to support the Desert Shield/Desert Storm operation. Could you speak to the job that these employees, these government employees performed in Saudi Arabia, the quality of it?

General TUTTLE. Yes, sir. I had some of this, of course, in my testimony because I think they were certainly used as an example of the highest degree of patriotism and commitment that one could expect of anyone in the public service, whether military or civilian. As you may know, about 18 of them deployed in early September to help the Marine tanks apply the increased armor. And they worked under horrible conditions, did an extraordinary job for which the Marines were very grateful.

And then the 200 deployed to modernize our two divisions, to up-armor them so that our soldiers would only face the enemy with the most modern tanks the United States could provide. And they did an extraordinary job in about 3 or 4 weeks less time than even the most ambitious estimate that we could have ever expected. And still there are 20 to 30 that remain over there today continuing to work on keeping the tanks in good shape.

Senator SHELBY. Would you characterize that work for us and the job they have done as superior or outstanding?

General TUTTLE. Extraordinarily. I have been down and visited them before they left, visited them when they came back. The Chief of Staff of the Army came to visit them, so I think that speaks that they have our utmost respect. Of course it has been no surprise. We have known Anniston people have done that kind of job for years.

Senator SHELBY. So they have done a superior and extraordinary job?

General TUTTLE. Absolutely, sir, and please get that printed in the newspaper down there. I cannot say it too often.

Senator SHELBY. General, I understand there is some move to relocate the missile maintenance work that has been done at Anniston to the Letterkenney Army Depot. I know and you know the Anniston Army Depot's reputation of providing tactical missile support for the past 23 years is basically unsurpassed. It is my understanding that Anniston has additional capacity that now exists to accommodate any added work load. I understand that Anniston is to receive approximately 366 jobs from the Sacramento Army Depot as a result of a base closure in the future. However, these jobs are lower grade jobs than the tactical missile stuff.

It was my understanding that around 1980 these jobs were moved from Letterkenney to Anniston, that is the M-65 airborne TOW system and so forth, because they did not have the facilities or the people to really work on that. Is that correct?

General TUTTLE. Yes, sir. But as you may know, in the business of looking at the cross-servicing of our equipment within the services, we had a group made up of all the services to look at each of the commodity areas and the tactical missile group. Navy, Army, Air Force all participated, and made a recommendation to consolidate all of the tactical missile maintenance and build a center of excellence, which we already have. Letterkenney now has come far, I would say, since 1980, because it is now doing high quality missile work for both the Air Force and Navy. And that was one of its major advantages. I am sure that led the group to do that.

Senator SHELBY. Will that save money too?

General TUTTLE. It will save money, yes, sir, and it will keep us from facilitizing a number of places to do the same work load. We will bring missile repair off contract and do it much cheaper in-house. And so we think the rationalization that that offers is a very attractive one.

Senator SHELBY. General Tuttle, I have only a minute or so, could I refer you to the chemical defense as Desert Storm was concerned and the role that Ft. McClellan at the chemical contamination training facility there played there? You know, we know and you know that Ft. McClellan is on the base closing list, the recommendation. What is going to happen to this? Does it make sense to close this facility in view of the uniqueness of its mission there?

General TUTTLE. I would like to beg your indulgence. That is not my area of expertise now, and I know there are ongoing discussions about what to do with that. But I am really not prepared to offer a useful answer to you, sir.

Senator SHELBY. Okay. I will get that. Mr. Chairman, thank you for your indulgence with me. My time has expired.

Senator LEVIN. Thank you, Senator Shelby. Let us go back to the Desert Storm issue. One of the problems that I see coming up here is that some of the maintenance and repair bills from the conflict are going to be coming in fiscal year 1992 instead of in 1991, but the only authority to pay for incremental costs of the Persian Gulf war from the defense cooperation account is through fiscal 1991. Is that a problem? Do we need to extend that authority so we can pay those bills?

General McDONALD. In my opinion that is a problem, Senator, because much of the work load, as we have already discussed, cannot possibly be inducted in time to obligate those funds in this fiscal year. There is also a question of capacity and timing and coordination with the using commands in terms of when equipment will be made available.

Senator LEVIN. Do we know about how much that will be, will it extend beyond fiscal 1991 dollarwise?

General McDONALD. I would think all the way through 1992 from an Air Force perspective, possibly beyond that.

Senator LEVIN. About how many dollars will be needed that would be lost that could not come from that account if we do not extend the authority beyond 1991?

General McDONALD. I would have to provide that for the record, and one of the reasons is because we still do not know what the allocation is. That allocation is being made this week by the Department of Defense.

Senator LEVIN. Would you say a significant amount of money and a significant percentage of the total cost, or just a significant amount?

General McDONALD. A significant amount of money.

Senator LEVIN. Not necessarily a significant percentage? It may be less than 25 percent of the bills?

General McDonald. I think I could not estimate that at this point in time any closer than that, Senator.

Senator Levin. That is fair enough. General Tuttle, how about you?

General Tuttle. I agree with General McDonald's view that there will be a significant work load in 1992, and I suspect into 1993, simply because of the capacity of our facilities to take the work. Eight hundred forty tanks that we must run through Anniston, for example, cannot be done in a year and need not be done in a year. We do not need to peak up to do that. What we ought to do is spread it out over the years so that we do not have to protuberate the work force down there. We do not need to issue them to the Guard until sometime in 1993 or 1994, so I would highly recommend that we extend the life of those funds as long as possible, sir.

Senator Levin. Okay. What about spare parts replacement, spare parts munitions supplies that were consumed during the war? Is it your plan to replace all or nearly all of the spare parts and supplies that were consumed?

General McDonald. Yes, sir. In fact, in my case, to the degree that we can estimate exactly what we expended, and that is largely based on the financial reporting systems where we put tags on everything that was Desert Shield or Desert Storm related, we have aggregated that data. Obviously, there are some ongoing processes and then the uncertainty of the future costs that we have just discussed are involved here. But our plan in the Air Force is to return our commodities and our spare parts to the pre-Desert Storm/Desert Shield stock levels.

Senator Levin. How long is that replacement process going to take? Would it be over by 1992?

General McDonald. For a lot of the commodities, yes. For some of those where we only have one base at the present time, and I am thinking principally of munitions now, it may be longer than that. As you know, we have acquisition lead times in those cases that can go as high as 27 to 36 months. So it is my expectation that while we may be on contract before that time, the delivery period would extend that long.

Senator Levin. Okay. General Tuttle, your comment on the question of replacement of spare parts and supplies that were consumed. Is it your intent to replace them all?

General Tuttle. We would intend to return to the same relative status for the smaller force structure. Obviously we do not want to build excess in there. But since we went into this with about 20 percent of our secondary item war reserves, that we would like to feel a little bit more comfortable going into the next contingency, should that happen. So we will be trying to, as we understand what we have left and allocate those parts, because a lot were not consumed, we will be able to understand better. But I would say it will take us at least a year or two to complete that effort, especially for the long lead time spares.

Senator Levin. General Tuttle, how many supplies, particularly rations and consumables, did you have on order when the conflict ended that you are not going to need or will not be able to use?

General Tuttle. I will have to provide that for the record. We are still not through with our scrub. We have done most of the contracts. What we did in most cases was to amend contracts rather than write new ones. We went from a peacetime level to a wartime surge option, and those options are largely being canceled and we are returning the contractors to their peacetime level. So we deliberately started this thing to say we did not want to build excess, but we also did not want to dry up the production base. That would be horrible. So we do not think we have a problem, but we are still not in, and I will provide that, sir.

[The information follows:]

EXCESS CONSUMABLES

The Army is intensively managing all requirements for Operation Desert Storm. Units have submitted cancellations for items they no longer need. This will result in reduced wholesale requirements. We will closely monitor all procurement cutback/cancellation recommendations to maximize reductions where it is in the best interest of the Army.

Rations could be more appropriately addressed by the Defense Logistics Agency which manages these for all DOD agencies. Due to the number of variables at play here, such as support to the residual force, supplies being expended as humanitarian aid to the Kurds and refugees, and ongoing force structure changes, it is not possible to give an accurate dollar figure for unneeded consumables and other supplies at this time. Although some of the buys which were initiated early on may eventually prove to be above current requirements, we believe that much of this materiel will be used to fill existing shortages in our war reserves. Some materiel will fill shortages at the wholesale level created by materiel expended in the Gulf conflict. This is an area that we will be monitoring very closely in the next few months as we redeploy and reshape the force.

Senator LEVIN. Okay. General McDonald, do you want to comment?

General McDONALD. I would echo what General Tuttle has just said. We are still in our scrub of all of the contracts, and in some cases where termination costs may be excessive we may continue to take delivery on some things.

Senator LEVIN. Would you try to get us an answer to that question for the record as it becomes available to you?

General McDONALD. Yes, sir.

[The information follows:]

Generally, contracts awarded during the Desert Shield/Storm timeframe were to fill urgent requirements which could not be supported through any means other than procurement. In light of the quick end of the conflict, all of these contracts will be reviewed to determine whether or not the assets are still required.

Since we are still supporting deployed weapon systems in the Middle East, in many cases it would be premature to terminate contracts at this time. Once it is determined that assets on order are no longer required, the cost effectiveness of contract termination will be determined and the appropriate actions taken.

Senator LEVIN. My time is up. Senator Shelby.

Senator SHELBY. Mr. Chairman, I have no more questions. I just want to say I appreciate General Tuttle and General McDonald, one, their candor, but more than that their professional dedication and their hard work. It is ongoing, it never ends. But there are a lot of tough decisions down the road, a lot of them. Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Senator Shelby. I would like to move to the unrequired portion of the inventory issue which we talked about, I think, last year, the excess inventory, so-called. The total inventory figures for the DOD are down from 1989 to 1990 from $109.4 billion to $101.7 billion. That is also true for the Army and the Air Force as a subset of the DOD. When you look, though, to what is called potential excess, Dave Lyles will put a chart up there for us. The DOD number on potential excess is down from 1989 to 1990, but that is because the Navy is way down. They have cut theirs in half. But the Army and the Air Force went up. Let us take the Army first. General Tuttle, do you see the number I am referring to there, that 0.5 to 1.4?

DOD SECONDARY ITEM INVENTORIES—POTENTIAL EXCESS

[Amounts in billions]

Year	Total DOD [1]	Army	Navy	Marine Corps	Air Force	DLA
1980	$ 2.5	$ .5	$ .9	$ .1	$ .7	$ .3
1981	3.0	.8	1.1	.1	.8	.3
1982	3.0	.8	.9	.1	1.0	.4
1983	4.1	.7	1.3	.1	1.6	.4
1984	7.1	1.1	1.3	.1	4.0	.6
1985	5.6	1.0	1.6	.1	2.0	.9
1986	5.6	1.1	1.5	.1	1.8	1.0
1987	5.0	.4	2.0	([2])	1.2	1.2
1988	9.6	.4	6.2	.1	1.5	1.5
1989	10.1	.5	6.7	.065	1.2	1.5
1990	8.1	1.4	3.2	.047	1.9	1.5

[1] Service and DLA totals may not equal DOD total due to rounding.
[2] Less than $50 million.
SOURCE: DOD Supply System Inventory Reports.

General Tuttle. Yes, sir, I do.

Senator Levin. What is the reason for that?

General Tuttle. Sir, at those low numbers with a $19 billion overall inventory, I think we see movements. Now, what we did during this time, we disposed of about $400 million of excess secondary items, just out of the system. At the same time we started with about $4.3 billion potential excess inventory. It is now down to $2.3 billion. However, that roughly, we have about $1.9 billion now in a screening process which we must go through with other Federal agencies and the foreign military sales customers, and that takes a little time. So we have run our potential excess down.

So these numbers, I have to go back and see, because my numbers show still higher than what is reported, although mine is really as of December 1990. So, about $2.3 billion would be my comparable number to the $1.4 billion that is shown there.

Senator Levin. So that would be the same definition of potential excess?

General Tuttle. Yes, sir. That is the potential excess inventory.

Senator Levin. Your numbers for potential excess for 1989 was $4.3 billion, was it?

General Tuttle. Yes, sir. $4.3 billion overall. We are down to $2.3 billion, those that were previously classified for retention and have been carried as that. So I am not exactly sure what DOD gives you. I will have to get that particular report. (See page 120.)

Senator Levin. I wonder if we can put up the other chart.

General Tuttle. They apparently have devalued the unserviceables out of that, and what you have in my number, my expert tells me, includes the unserviceables. So this would be the serviceable part of it.

DOD SECONDARY ITEM INVENTORIES—UNREQUIRED

[Amounts in billions]

Year	Total DOD [1]	Army	Navy	Marine Corps	Air Force	DLA
1980	$10.1	$1.8	$ 3.0	$ .2	$ 4.3	$ .9
1981	11.1	2.0	3.5	.1	4.5	.9
1982	12.6	2.0	4.2	.1	5.0	1.3
1983	14.6	2.1	4.9	.2	5.8	1.7
1984	19.3	3.1	6.5	.2	7.5	2.0
1985	25.0	3.8	8.8	.2	10.0	2.3
1986	29.8	4.0	8.1	.3	14.7	2.7
1987	28.9	4.8	10.6	.2	9.9	3.3
1988	33.6	5.6	11.7	.2	12.7	3.5
1989	34.0	5.4	11.9	.3	12.8	3.8
1990	29.0	3.6	9.5	.3	11.4	4.2

[1] Service and DLA totals may not equal DOD total due to rounding.
SOURCE: DOD Supply System Inventory Reports.

Senator Levin. Let us go back further. This is the unrequired subset. Do you see the numbers for the Army, $5.4 billion and $3.6 billion?

General Tuttle. Yes, sir.

Senator Levin. Is that the two numbers you gave me, is that comparable to those?

General Tuttle. Yes, sir, that is comparable.

Senator Levin. If those two numbers are comparable, then how do we say that the potential excess numbers are also comparable?

General Tuttle. We are into the same box the Navy was in last year, I fear. The numbers I gave you are within about $1 billion of that. They may have included those which are in screening. So if I add what is in screening, the $1.9 billion, to the $2.3 billion, I come up somewhere, and take out the unserviceables, and I am, I think, in the same ballpark. So I suspect it is just how we are calling the different pieces of that. But what is important, I would think, sir, is that we did get rid of another $400 million this past year, through December. Now the activity really slowed down from——

Senator Levin. You say you got rid of $400 million. Show me on either chart.

General Tuttle. It will not come up on that chart because it is hidden in the pluses and minuses that go on there, I suspect, sir. And unfortunately DOD does not record what actually went to property disposal, to the defense reutilization marketing organization.

Senator Levin. Well, the way you define excess inventory, the way you define it you would agree that it went up from $0.5 billion to $1.4 billion or not? I am talking about that other chart now.

General Tuttle. It may well have, sir, because it is a constant, as we identify excess from the field and bring it into the depot and it is categorized, as we have dropped numeric retention, as we drop our standards for retention of stocks, we change a category of an item from one classification to another. So the numbers are going to just dance at that level. Overall what we are trying to do is to press the whole thing, obviously.

Senator Levin. Yes, well that is what I am pressing you on, is that that is a higher number than it has been for 10 years.

General Tuttle. But as you see, it was around $1.1 billion. So as I say, as we move out of this $4 billion which is not even shown there, the roughly $4 billion which is really potential excess, it is what I have been dealing with, because that is the large piece that is cluttering up our depots and causing us problems.

Senator Levin. Do we have a chart on that? Can you give us an apples and apples comparison on that number, the 4.3? Would that be down from last year?

General Tuttle. Yes, sir.

Senator Levin. 4.3 to 2.3?

General Tuttle. Yes, sir. 2.3 in December 1990.

Senator Levin. 2 years ago would it have been higher or lower than 4.3? When I say 2 years ago I mean in 1988. Would it have been higher or lower than 4.3?

General Tuttle. I will have to get that for you, because I think it may well have been lower. In that year, we went to DOD and requested them to take off the requirement to hold this inventory, so it immediately jumped.

Senator Levin. Okay. I think it is too complicated to pursue. But if you could give us a chart where 2.3 is your number for 1990, 4.3 is your 1989 number, and then just go back 10 years.

General Tuttle. I will map it to this, yes, sir.

[The information follows:]

Potential Excess

The $2.3 billion and $4.3 billion I cited earlier represent the dollar amount of inapplicable inventory stratifying to retention categories in the September 1989 and December 1990 AMC wholesale budget stratifications. The Supply System Inventory Report contains wholesale and retail data and therefore there is not a direct correlation between the SSIR and the figures I cited. Additionally, the fiscal year 1990 unserviceables in the SSIR were devalued to carcass value. I was attempting to show the reduction that we have achieved over the past year by comparing the most recent budget stratification figures. The charts below utilize the Supply System Inventory Report data to illustrate my point.

Inapplicable Secondary Item Inventory—Supply System Inventory Report

	(Billions)
1981	$2.0
1982	2.0
1983	2.1
1984	3.1
1985	3.8
1986	4.0
1987	4.8
1988	5.6
1989	5.4
1990	3.6

Inapplicable Inventory Breakout

[Dollars in millions]

	1989	1990
Economic Retention Stock	1,430	1,640
Contingency Retention Stock	1,810	574
Numeric Retention Stock	1,690	0
Potential DOD Excess	510	1,400
Total	5,440	3,614

For the purpose of comparison, I utilize the breakout of dollars stratifying to retention categories within the fiscal year 1989 and fiscal year 1990 SSIR data above. As can be seen, we have made progress in reducing materiel held in retention categories and moved it closer to ultimate disposal/reutilization within the Potential DOD Excess category. We attribute our reductions within the retention categories to the elimination of materiel held as Numeric Retention Stocks and tightening of the criteria for retaining materiel in the Contingency Retention level. The inventory which has stratified to Potential DOD Excess is being screened for potential foreign military sales. That portion of the Potential DOD Excess not sold to FMS customers will be offered to Defense Reutilization Marketing Service.

Senator LEVIN. How about the Air Force? Is your picture as clear?

General McDONALD. I believe I agree with your numbers the way they are written. We worked very aggressively over the last year to bring down our total inventory, particularly as the force structure changes were announced. And we continue that process. We disposed of almost $1.3 billion last year. Our goal this year was $1.1 billion. We are already ahead of that, and so I expect by the end of this fiscal year we will be up around $1.5 billion or $1.6 billion.

Senator LEVIN. That is I think going back to the other chart. Again, are these numbers numbers you agree with for the Air Force, 12.8 and 11.4?

General McDONALD. I agree with the total of the two. I do not think I agree with the one on the previous chart.

Senator LEVIN. This one right here? Potential excess. That number there is not a number you buy either?

General McDONALD. No.

Senator LEVIN. That is the 1.2 for 1989 and the 1.9 for 1990. And as you define potential excess, what would those two numbers be?

General McDONALD. I believe, if either one of them, if the one for 1989 is correct, and I cannot verify that here because I do not use this method, then I would guess that my 1990 number would be somewhat in the neighborhood of 0.9.

Senator LEVIN. So the potential excess inventory as you define it, you had less of it on hand at the end of 1990 than you did at the end of 1989?

General McDONALD. I believe so. But again, as with General Tuttle, I will give you the 1989, 1990, and 1991 projections.

Senator LEVIN. However you define it, and go back through the 1980s for us so we can have an apples to apples comparison through the 1980s.

[The information follows:]

The two charts displaying supply system inventory data are inaccurate. The data labeled "Potential Excess" is correct except for the years 1985 and 1986. During our validation process in 1987 we found the figures for those years to be in error. Correct data has been provided below.

Additionally, the data labeled "Unrequired Inventory" is not accurately categorized since the Air Force does not retain unrequired assets. This category of assets is properly called "Long Supply Inventory" and consists of assets held for the following reasons:

1. Contingency Retention Stock—inventory held for possible specific contingencies.
2. Economic Retention Stock—inventory determined to be more economical to retain for future peacetime issues instead of replacement of future issues by procurement.
3. Numeric Retention Stock—inventory held because disposal is unfeasible, uneconomical, or for which a management decision has been made to retain stock in the supply system.
4. Potential Excess Stock—inventory above all authorized levels but for which final determination as DOD excess materiel has not been made.

As in the case of "Potential Excess" data, the data for "Long Supply Inventory" is incorrect for 1985 and 1986; corrected data is provided below.

Additionally, to avoid confusion regarding inventory stocks, it is important to know that the "Potential Excess" data is a subset of "Long Supply Inventory." The corrected Air Force data is:

[Dollars in billions]

	Potential Excess	Long Supply Inventory (including Potential Excess)
1980	.7	4.3
1981	.8	4.5
1982	1.0	5.0
1983	1.6	5.8
1984	4.0	7.5
1985	1.1 (was 2.0)	7.5 (was 10.0)
1986	.8 (was 1.8)	9.2 (was 14.7)
1987	1.2	9.9
1988	1.5	12.7
1989	1.2	12.8
1990	1.9	11.4

Senator LEVIN. General Tuttle, on the depot maintenance backlog from 1991 to 1992, the depot maintenance backlog is going to decline from $101 million to $48 million. But then in 1993 it goes way back up again. Is that right?

General TUTTLE. That is correct. That is what the budget says.

Senator LEVIN. Is that manageable? Is this going to have an impact on readiness and training? Give us a feel for that.

General TUTTLE. With the force structure reductions that we are going through, this is end item depot overhaul we are talking, not components, just strictly end item. It is hard to say what it will be, because what we may end up with as we reduce the numbers of divisions, especially in Europe, and we bring back equipment and it goes to other units, while there may be unserviceable end items, we will end up perhaps collecting it in Anniston and other depots until money is available or until we no longer need it. So it is hard to say right now whether that is going to be a problem for us.

Senator LEVIN. Okay. And General McDonald, the Air Force depot maintenance backlog also goes to—well, I will not give you the numbers. But you funded 94 percent of your depot maintenance requirement last year, but by 1993 you are going to go to 85 percent of the requirement. And so the question is is that going to have an impact on unit readiness and training?

General McDONALD. We do not believe so at this point, Senator, but part of that of course is predicated on one of the DMR's that assumes that we will have a 10 percent savings as a result of stock funding of depot level reparables. And presumably that will encourage more local repair rather than depot repair. I have signed up to achieve those savings. At this moment we are not quite sure whether they will materialize. Time will tell.

Senator LEVIN. Whether they will materialize or what the impact will be?

General McDONALD. Either way.

Senator LEVIN. Either way, you do have some concern. I noted a little concern in there between the lines in terms of the impact on readiness. You are just not really sure. You are hopeful, but not confident, is that a fair way to describe it? Or you are hopeful but not really certain? How would you describe it?

General McDONALD. I am hopeful, but I am not elated.

Senator LEVIN. You are surely not over confident at any rate. Okay. We thank you both for your testimony, it is helpful, and as always, we appreciate you being here. I do not know if there will be other questions for the record, but we will keep it open. We will keep it open long enough for those specific answers as well. Thank you again.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR ALAN J. DIXON

U.S. INDUSTRIAL BASE AND OPERATION DESERT STORM

Senator DIXON. General Tuttle and General McDonald, an article in the March 25 edition of the Washington Post was headlined "U.S. Relied on Foreign Made Parts for Weapons." This article noted that, "With the globilization of high technology industries, U.S. troops in combat in the Persian Gulf found themselves dependent for the first time on foreign countries for the tiny semiconductor chips, transistors and other electronic parts essential to their advanced weapons."

This article went on to note, "While the issue of the Pentagon's dependence on foreign suppliers was debated before the Gulf war, it came into sharp focus during the conflict when the Bush administration had to seek help from foreign governments in several cases to get parts needed by American manufacturers. On nearly 30 occasions, the Bush administration needed help from governments to get delivery of crucial parts for the war effort".

I would like to ask both of you to address some questions about this article. Are you aware of occasions during the Persian Gulf conflict when the U.S. military or U.S. defense contractors had to seek help from foreign governments to get parts needed by American manufacturers for weapons or equipment?

General TUTTLE. The Army has a number of foreign sources of supply as a result of our normal competitive procurement process. This does mean we are dependent upon these sources but we did find it prudent to accelerate production from these sources to meet urgent wartime requirements since they were currently producing the items we needed. Here are examples where foreign contractors were asked to provide parts: M-48 Filter Units from Israeli Turrent Distribution Boxes from the Netherlands and MK-19 Machine Gun Golds from Israel. In some cases foreign countries donated or loaned equipment for the war effort. For example, the following was provided: Chemical Agent Monitors from Canada, M93 Nuclear Bio Chem Reconnaissance Systems from Germany and the M249 Machine Gun from Belgium.

General McDONALD. No. Although the USAF did procure some items from foreign suppliers during the Persian Gulf conflict, our discussions with system managers did not identify any occasions where foreign governments were contacted to obtain spare parts for military systems.

However, the Avionics Management Production Division at Warner-Robins Air Logistics Center (WR-ALC) states that availability of some avionics or electronics spares is a "very real problem." In part, this is due to non-availability of some items made by foreign manufacturers. However, this problem reflects a general, worldwide reduction of avionics and electronic suppliers because of vendor technical obsolescence. For example, WR-ALC reported they were not able to buy one item, a Cathode Ray Tube (CRT), needed for E-3 operations during Desert Storm. The Japanese suppliers did not want to produce the relatively small number of items WR-ALC needed. The issue was elevated to the WR-ALC Commander, and was brought to the attention of a Japanese liaison officer stationed at WR-ALC, but was never officially taken to the Japanese Government or other branches of the U.S. Government. An alternate supplier was found for the item.

Senator DIXON. Can any of you describe the "nearly 30 occasions" mentioned by this article when "the Bush administration needed help from foreign governments to get delivery of crucial parts for the war effort?"

General TUTTLE. We contacted the office of the author of the Washington Post's article on several occasions. He was not available and we have not been able to confirm the occasions described in the Post.

General MCDONALD. No. Discussions with Air Force Logistics Command (AFLC) Battle Staff members, AFLC system managers, the Air Force Priorities Assistance Office, and the Department of Commerce failed to identify any case where there was foreign government involvement in obtaining spares. Generally, foreign suppliers were as cooperative as American suppliers of spare parts.

Senator DIXON. Both of you had to surge your purchasing systems to meet the logistics requirements to the Persian Gulf war. How many times did you have to go off-shore to foreign suppliers to meet your surge requirements?

General TUTTLE. We do not know how many times we used off-shore suppliers because many are sub-contractors with whom we have no direct contracting relationship. Further, many suppliers in this country also have off-shore capabilities which were used to expedite the delivery of the hardware we needed. Some examples were provided in my previous answer.

General MCDONALD. Forty-six.

Senator DIXON. General Tuttle and General McDonald, the Armed Services Committee has just received the 1991 Joint Military Net Assessment by the Joint Chiefs of Staff, and it contains some alarming conclusions about our defense industrial base.

This Net Assessment states: "The Loss of subtier suppliers—manufacturers of subsystem components of larger systems—is a threat to our ability to field state-of-the-art weapon systems on a timely basis."

Both of you are directly responsible for supporting weapons systems in the field.

Have you had first-hand experience of any problems from this loss of subtier suppliers?

General TUTTLE. We will have fewer suppliers as budgets are reduced and companies streamline to fewer sources. We do not have an acute and pervasive subtier problem yet but subtier sources have chronic problems in modernizing and improving manufacturing processes. By way of examples, we experienced difficulty in rapid increases in production of certain long lead aircraft parts such as bearings and forgings and difficulty in qualifying new sources rapidly. We have only one supplier left in the United States for the Acrylic used in Unity View Devices for combat vehicles. Additionally, a casting company for the M88A1 recovery vehicle went out of business due to the declining business base. We also project that we may have a loss of subtier capacity with the projected reduction in Abrams tank production.

General MCDONALD. The loss of some subtier suppliers has affected the amount of spare components in the inventory and in some cases has affected our ability to fully support operating units. However, before the entire fleet is impacted, end item suppliers are able to find other subtier suppliers for the material.

Regarding the responsiveness of subtier suppliers during the Desert Shield/Storm period, we (AFLC and the ALCs) did not receive any complaints from end item suppliers about subtier supplier support. In fact, most praised their suppliers' responsiveness.

Senator DIXON. General Tuttle and General McDonald, the 1991 Joint Military Net Assessment goes on to conclude: "insistence on domestic sources for U.S. defense systems may not always be prudent, but the United States must maintain access to needed materials and production means.

Would you like to see a greater insistence on domestic sources for key U.S. defense systems and components?

General TUTTLE. Maintenance of a strong U.S. industrial base is preferable to buying critical defense products and components off-shore. Cost can be considered for less critical items. Foreign source dependency should not be allowed to impact our military readiness prior to or during a conflict or crisis.

However, as we place greater reliance on commercial products and practices and as our budget decreases we will become just another customer in the world market. This will result in less visibility and control over the sources of supply. In some cases foreign company location, political environment, labor strikes, transportation problems and plant closures can hinder the United States from rapidly obtaining needed equipment. This is especially true in fast moving crisis situations. We should distinguish between foreign sourcing and foreign vulnerability and minimize or eliminate foreign vulnerability for the parts of our most critical weapons systems.

General MCDONALD. Only if domestic suppliers want to support the defense industry, are willing to compete, and can provide the quality offered elsewhere. To develop domestic sources for many components at this point in time would require long-term, costly investments by domestic sources; investments better applied to developing new technologies, and financing plant modernization.

Senator DIXON. What alternatives can you suggest to protect our defense industrial base?

General TUTTLE. The Army Materiel Command has developed strategies which are being staffed. They will help achieve and maintain a flexible, capable, and responsive industrial base. Implementation of these strategies will serve to protect our defense industrial base. The competitiveness of U.S. industry must be improved. We must learn to survive in a competitive global environment while being faced with budget reductions. A few samples of these strategies are noted below:

The Army must foster long term business relationships through stability of buys. Acquisition strategies should be developed with the industrial base in mind.

The defense industrial base must be moved closer to the commercial base through use of commercial practices, best value evaluation techniques and quality-cost improvements.

We must place greater reliance upon dual use (military-commercial) process technology, including use of commercial materials and practices and the two-way transfer of the latest production technology between the commercial and military sectors. We must also increase the inherent flexibility of manufacturing processes that will make it easier to meet surge and mobilization needs.

General MCDONALD. Incentivize the industrial base help them develop new technologies, then make sure they will not lose their lead by placing export controls on new technologies.

LOGISTICS REQUIREMENTS FOR OPERATION DESERT STORM

Senator DIXON. General Tuttle and General McDonald, did either of you experience any shortages of spare parts during Operation Desert Storm that caused any operational problems for the forces deployed in the Persian Gulf?

General TUTTLE. The Army experienced no spare parts shortages that caused any adverse effect on ODS key weapon systems readiness. As ODS progressed, the supply of spare parts improved. The percentage of fill for requisitions for spare parts increased from 84 percent in September 1990 to 94 percent at the end of February 1991. However, the severe desert environment did necessitate intensive management of certain spare parts. Some examples of parts intensively managed are tires, filter sets for gas masks, circuit card assemblies for missile systems, and rotor blades for aircraft.

General MCDONALD. No. Operational capabilities of forces deployed to the theater were not degraded during Desert Storm due to spare part shortages. Close cooperation between battle staffs in the theater and in AFLC allowed us to give potential problems prompt attention and assured us the ability to sustain record level mission capable and sortie generation rates. We were able to keep the status of needed parts visible and deliver the parts to the customer quickly using priority airlift such as Desert Express. AFLC produced over 85,000 parts in a "surge" status and added 488 extra LOGAIR transport missions to complement our control of Desert Express cargo priorities.

Senator DIXON. General McDonald, last November the Chicago Tribune carried an article about the Air Force entitle "Gulf move stripped planes of parts". According to this article, the Air Force had to cannibalize "hundreds" of spare parts to deploy its aircraft to Saudi Arabia. Was this article accurate?

General MCDONALD. We cannibalized parts from non-deploying aircraft to assure the aircraft deployed had enough parts in their War Reserve Spares Kits to conduct at least 30 days of high surge operations without the need for resupply. Parts were not cannibalized simply to permit the aircraft to deploy, as the article suggested. The most affected weapon system was the F-15E, a recently fielded model with a still immature logistics pipeline. As discussed in my record statement, this shortage was partially due to the lack of funds to purchase spare parts for war surge levels.

ROCK ISLAND ARSENAL

Senator DIXON. General Tuttle, I would like to ask you a few questions about the base realignment recommendation involving Rock Island Arsenal. What is the reasoning behind the proposed realignment of the Armament, Munitions and Chemical Command from Rock Island Arsenal to Redstone Arsenal and the realignment from the Depot Systems Command from Letterkenny Army Depot to Rock Island Arsenal?

General TUTTLE. These moves are part of larger, carefully considered efforts by the Department of Defense, the Department of Army and the Army Materiel Command (AMC) to consolidate like functions and realize economies of scale.

The Department of Defense has initiated two major efforts to consolidate Inventory Control Operations and Depot Maintenance operations. Defense Management Review Decision (DMRD) 926 has directed the consolidation of Inventory Control Operations at AMC and reduce the current number of six ICPs. The transfer of ICP operations and related integrated material management operations will combine missile and armaments ICP operations.

The Defense Depot Maintenance Council (DDMC) was recently established by the Secretary of Defense to consolidate depot maintenance activities of the Army, Navy, and Air Force. The DDMC has recommended the consolidation of depot maintenance for Army, Navy, and Air Force.

Similar economies of scale will be realized from the consolidation and transfer of the Headquarters for Depot Systems Command (DESCOM) and related command and control for depot maintenance and industrial operations from Letterkenny, Pennsylvania, to Rock Island where the Industrial Operations Command will be established. The savings to be realized from this consolidation will total some $26 million per year starting in 1997.

Senator DIXON. What will be the function of the new Industrial Operations Command at Rock Island Arsenal?

General TUTTLE. The Industrial Operations Command at Rock Island Arsenal will have primary responsibility for all depot maintenance, weapon system production, and mobilization planning for the Army as well as the management and production of munitions for the Army, Navy, and Air Force under the direction of the Single Management for Conventional Ammunition (SMCA).

Senator DIXON. General Tuttle, how do these realignments produce savings of $66 million per year as suggested in the Base Closure Report?

General TUTTLE. The savings to be realized from the transfer of the Depot Systems Command and its related depot maintenance command and control functions from Lettekenny to Rock Island will come from a reduced workforce and will total some $26.9 million.

The savings related to the consolidation of Integrated Materiel Management (IMM) and Inventory Control Point (ICP) for the Armaments, Chemical, and Missile systems will come from a reduced workforce and will total some $23.5 million.

Senator DIXON. General Tuttle, Rock Island Arsenal has existing office space in its buildings for more people. Is there sufficient space at Redstone Arsenal to accommodate more people, or will new facilities have to be constructed at Redstone Arsenal as part of this transfer?

General TUTTLE. The availability of space at AMC installations throughout the country will increase at nearly all of those installations as the Army draws down its forces and reduces its supporting workforce at nearly all off those installations.

Unfortunately, the consolidations involved with the drawdown cannot be perfectly matched with available office space at all these installations.

Our cost/benefit calculations do indicate, however, that it would be considerably cheaper to build new facilities at some locations while closing facilities at other locations in order to realize economies of scale with the consolidated and streamlined operations that will be dictated by reductions in the force structure.

The construction costs associated with the transfer to Redstone Arsenal are presented on the following chart from the Army's Base Realignment and Closure report submitted to the Secretary of Defense.

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                REALIGNMENT SUMMARY (COBRA Ver 1.23)
                DESCOM HQ TO ROCK ISLAND--FORM IOC

Option NPV20            ($K) :  -126060     Losing Base     : LETTERKENNY AD
Total One-Time Cost     ($K) :    35687     Group           : AMC
Years to Break Even          :        5     Service         : US Army
ROI Years                    :        0     Option Package  : DESCOM

                  Net Cost   ($K)           Constant Dollars

              Year1      Year2      Year3      Year4      Year5      Year6     Beyond
               1992       1993       1994       1995       1996       1997
             ------     ------     ------     ------     ------     ------     ------
Mission           0          0          0          0          0          0          0
Personnel         0          0          0      -7016     -20071     -26126     -26126
Overhead          0          0          0          0       -261       -872       -872
Construct       607          0       3907       4232          0          0          0
Moving            0          0          0      11208       6496          0          0
Other          1167       1167       1167       3206       2530          0          0

NET            1774       1167       5073      11630     -11306     -26998     -26998

NOTE:    Negative numbers are net savings
         Positive numbers are net costs
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Senator DIXON. General Tuttle, the Army has a large investment in its current workforce at Rock Island Arsenal. How many of these skilled people do you expect to lose if the Armaments, Munitions, and Chemical Command is transferred to Redstone Arsenal?

General TUTTLE. Our experience has shown that about 30 percent of the workforce will chose to relocate with a transfer of functions. This of course varies by the type of function and the geographic location of old and new installation.

In the case of Rock Island, some of the workforce may stay behind to fill some 700 positions being transferred from Letterkenny Army Depot to Rock Island. This will certainly benefit the Army.

Similarly, the Missile Command (MICOM) and the Huntsville area has a skilled workforce that could be available to operate the Integrated Materiel Management functions that will transfer to Huntsville.

Senator DIXON. General Tuttle, industry is learning the value of concurrent engineering which has design and production engineers working together during development. Did the Army consider the value of having all weapons experts from design to logistics located with the Army's largest weapons manufacturing arsenal at Rock Island?

General TUTTLE. Yes, we have thought of the benefits to be derived from relocating all the weapons systems experts currently located in other parts of the country to Rock Island. Unfortunately, the costs of such a relocation would be substantial, and the move would take more than 20 years to realize a positive payback.

AMC now has weapons systems experts located throughout the country from Picatinny Arsenal in New Jersey, Edgewood Arsenal in Maryland, Watervliet Arsenal in Massachusetts, and elsewhere. The cost of relocating all those activities to Rock Island would be prohibitive.

Senator DIXON. General Tuttle, your command's recent "AMC Vision 2000" proposal originally called for locating all six of the Army's commodity commands at Redstone Arsenal. Now you are just proposing to move the Armament, Munitions and Chemical Command to Redstone Arsenal. What is the status of this "AMC Vision 2000" proposal now?

General TUTTLE. The concept of an AMC of the future (AMC Vision 2000) was initially conceived in response to the events in Eastern Europe and the subsequent decision by the Secretary of Defense to reduce the size of the Army from 18 Active divisions to 12 by 1995, which will eliminate more than 25 percent of the Active military forces that AMC will be expected to support in the future. This translates into a considerable reduction in AMC's workload and the workforce needed to support that work.

Any business facing a reduction in the size of its mission and related workforce by some 25 percent would have to consider reducing the size of its physical plant and support infrastructure. The leadership at AMC responded accordingly by developing a concept of operations and an organizational structure for the future that would capitalize on economies of scale and on reduced base operations costs through the consolidation of operations into fewer installations. We considered building a new facility and a new AMC organizational structure that would do all of that.

The plan for consolidating research, development, engineering, and logistics planning operations into one facility was, and still is, a good one. Unfortunately, the decision to fund this investment cost of developing this new facility for the future had to be considered in the context of acquisition costs of new weapon systems and the high cost of maintaining 12 Active divisions at the high level of readiness required to respond to future Desert Storm type operations.

Senator DIXON. Do you plan to propose other parts of AMC Vision 2000 in the future?

General TUTTLE. The problems for which AMC 2000 were developed, that is, reduced workload and reduced funding, have not gone away. The high cost of maintaining and operating some 50 major installations and over 40 subinstallations throughout the United States will consume a larger percentage of our resources in the future. This will cut heavily into our direct mission operations and into our ability to develop new technologies, acquire those new systems of the future, and to support the current force structure of the future.

The concept of an AMC Vision for the future has already been developed in some detail to include costs of personnel relocations and new facility construction. That concept could be reconsidered at any time in the future, and undoubtedly, the Army leadership will give consideration to AMC's concept of a consolidated and modernized materiel command in its planning for the future.

However, our efforts at AMC will be turned now to looking at other options on a somewhat reduced scale. We are now looking at options that would consolidate functions and operations and reduce the huge maintenance and operating costs related to the infrastructure. Our current infrastructure was necessary to support a much larger force structure and does not capitalize on economies of scale from new automation technologies for supporting the Army of the future. These new options will not merely repeat the concepts of AMC Vision 2000, but rather, they will reflect a range of options for a somewhat reduced scale of modernization and consolidation.

Senator DIXON. General Tuttle, I have been informed that the university and college resources in the Rock Island area are larger than in Huntsville. The Rock Island area also has an excellent secondary school system. Isn't the skill of the local workforce an important factor in relocation decisions?

General TUTTLE. Yes, the skill of the local workforce is an important factor in relocation decisions. We are aware of the fine educational facilities in and around the Rock Island Arsenal. The decision to transfer the Integrated Materiel Management Operations from Rock Island to Redstone does not represent any dissatisfaction with those educational facilities or the quality of the workforce in that area. After all, we are planning to move some 700 workers from the Depot Systems Command (DESCOM) at Letterkenny Army Depot to Rock Island Arsenal. AMC is clearly impressed and pleased with the workforce in the Rock Island Area.

Senator DIXON. General Tuttle, in this time of budget constraints, it is important that we carefully use our existing resources. Have you done an analysis of how the existing space and facilities at Rock Island Arsenal can best be used? For example, have you considered relocating AMC Headquarters from Alexandria, VA to Rock Island Arsenal rather than building new facilities at Fort Belvoir? Have you considered moving Communications-Electronics Command out of leased space to Rock Island?

General TUTTLE. Rock Island Arsenal was evaluated along with all other AMC installations on the basis of criteria established by the Base Realignment and Closure (BRAC) Commission. Those factors include an evaluation of military value to the Army, available land for future expansion to accommodate consolidations of the future, accessibility to institutions of higher education, etc. Rock Island Arsenal ranked quite favorably in that evaluation, and, on the basis of that evaluation, the Army leadership has decided to transfer the Depot Systems Command Headquarters and some 774 civilian spaces from Letterkenny, Pennsylvania, to Rock Island.

The transfer of AMC to Rock Island Arsenal was considered among other options for relocating the AMC Headquarters from Washington. However, it was considered more efficient and effective to maintain the headquarters activity of AMC near the Pentagon and other executive branch and legislative branch activities. Furthermore, the construction of a new facility for the Headquarters at Fort Belvoir will be done without cost to the Treasury. Land at Fort Belvoir will be traded for a new building there.

Similarly, the transfer of the Communications-Electronics Command at Fort Monmouth, New Jersey, to Rock Island and other AMC facilities was considered in the recent Base Realignment and Closure activities. The cost of relocating personnel from New Jersey to Rock Island and the cost of building adequate space in Rock Island to accommodate the Communications-Electronics Command was substantial.

The payoff of owned versus leased space in New Jersey would not justify the relocation and construction costs related to that move.

EXCESS INVENTORY

Senator DIXON. General Tuttle, this subcommittee spent a great deal of time last year reviewing the issue of excess inventory in the Defense Department supply systems. Last year we heard that there was $10.1 billion of excess inventory of secondary items in DOD supply systems. The latest DOD Supply System Inventory Report shows that the Army's "potential excess of secondary items grows from $500 million in 1989 to $1.4 billion in 1990. What is the reason for this continuing growth?

General TUTTLE. The primary reason why the dollar value of Army managed potential DOD excess increased between 1989 and 1990 was the success of Army's efforts to reduce materiel held in retention categories which included the elimination of numeric retention stocks, and move it closer to ultimate disposal/reutilization. We must stratify assets to this potential DOD excess level while we review them for potential foreign military sales or disposal through the Defense Reutilization Marketing Service. Growth in this category is to be expected initially as we proceed with the Inventory Reduction Plan and reshaping the Army. As our sales and disposal actions catch up, this excess will be drawn down.

Senator DIXON. This subcommittee spent a great deal of time last year reviewing the issue of excess inventory in the Defense Department supply systems. Last year we heard that there was $10.1 billion of excess inventory of secondary items in DOD supply systems. General McDonald, the same DOD Supply System Inventory Report shows that the Air Force's "potential excess" of secondary items inventory grows from $1.2 billion in 1989 to $1.9 billion in 1990. What is the reason for this continuing growth?

General MCDONALD. The majority of the increase in potential excess from 1989 to 1990 was due to General Support Division (GSD) stock fund and Aircraft Replenishment Spares activities. In the GSD stock funded activity, the maturation of the B-1B aircraft and the phase down in its production line created production excess. We have no expected, recurring demand for these items in the future. In Aircraft Replenishment Spares, the disposal freeze codes were removed for aircraft over 18 years old. This action caused assets normally held for contingencies to be restratified as excess for the B-52, C-135, and C-141 aircraft. Also, a portion of the increase was due to obsolescence of items caused by replacement with a better and/or more reliable item or due to aircraft phase out. An example of this is the KS-87B camera intralens shutter on the RF-4C aircraft used for night photography. It was replaced by a better night photography system rendering the shutter obsolete.

DEPOT MAINTENANCE COMPETITION

Senator DIXON. General Tuttle and General McDonald, one of the Defense Management Review initiatives that was controversial in the Congress last year was the Defense Department's proposal to compete depot maintenance workload between government and private facilities.

There was some concern, particularly among our House colleagues, that this competition could cause some DOD maintenance facilities to be reduced or even closed. What has been the experience of your two commands with this public-private competition for depot maintenance workload?

General TUTTLE. As you know, the Army and Air Force have been prohibited by law from public-private competition and it has been only this year that the Appropriation/Authorization Acts have allowed the Army and Air Force to enter into public-private competition. To date, the extent of our experience has been the training that the Navy has provided to Headquarters, Army Materiel Command, our major subordinate commands, and Headquarters, Depot System Command. Army Materiel Command has established a competition task force consisting of maintenance, procurement, legal and resource management personnel to begin to provide policy and guidance to our major subordinate commands/Army Depot System Command as they begin to award the contracts for our seven competition candidates. Headquarters, Army Depot System Command has established a competition office to begin the process of training our depots in the competition process. In general, we are learning fast and will be able to award contracts to the best bidders by September 30, 1991.

General MCDONALD. While the Navy has been competing since fiscal year 1985, this is the first year we have been allowed to compete. We are in the preparation stage in regard to policy, training, and organization. We are just beginning to release the Request for Proposals (RFPs) for our five workload candidates. We have also identified the other services' workloads for which we intend to compete. The steps necessary to conduct competitions on work previously done organically, such as statement of work development, bid preparation, source selection, contract administration, etc., will require additional resources. While we believe savings will generate from depot maintenance competition, how much and whether they will offset the costs incurred, cannot be determined at this time. Careful evaluation of the current prototype competitions to determine actual benefits will be important.

Senator Dixon. What are your personal views on this program for competing depot maintenance workload?

General Tuttle. I am enthusiastic about competition. The Navy experience has shown a 20 percent savings by competing and I think we in the Army will do equally as well. I am sure the depots will win their fair share from private contractors and will lose some as well. The end result will be a lower cost to the taxpayer. I think competition is good for both the public and private sectors as we compete for the depot maintenance programs in the future.

General McDonald. I view competition as being a challenging endeavor and a means of achieving efficiencies within DOD. Our success on repair workloads we compete, which will be only those above core, will influence the future size of our maintenance facilities. There are, however, some inhibitors to competition and being competitive. We are not only a business, but we also have a wartime mission. Another inhibitor is the number of rules and regulations that apply to the government and not to private contractors. Some examples are the hiring and firing of people, job and grade classification, procurement actions, and funding. We will need your help to eliminate some of these inhibitors if competition is to be meaningful and successful. It is important to understand that we have no intention of competing all workloads. We intend to compete a limited number of non-core workloads. This will ensure that we can maintain an organic depot maintenance capability that can surge. By applying lessons learned to other workloads, we can realize additional savings without actually competing these workloads.

CONSOLIDATION OF CONSUMABLE INVENTORY MANAGEMENT

Senator Dixon. General Tuttle and General McDonald, one of the major Defense Management Review initiatives is to transfer the management for many of the consumable items managed by the military services to the Defense Logistics Agency. How is this transfer going?

General Tuttle. The Consumable Item Transfer Program to the Defense Logistics Agency mandated by the Defense Management Review began for Army on April 6, 1991 and is progressing smoothly. The preplanning and ongoing communication between AMC and Defense Logistics Agency planners have ensured a successful start. I do not anticipate any issues that would delay or preclude the transfer from occurring.

General McDonald. Our preparations for the transfer are complete. Following a delay for Operation Desert Storm, the first transfer took place on May 1, 1991. It takes approximately 150 days to migrate the necessary management data records. DLA will begin accepting management responsibility for items transferred from the Air Force on October 1, 1991.

Senator Dixon. Do either of you have any reservations about turning over management of more consumable items to the Defense Logistics Agency?

General Tuttle. No, we are fully committed and confident that the joint implementation plan for items approved to transfer will provide for the orderly transfer of data and information required by the Defense Logistics Agency Centers.

General McDonald. With a project of this magnitude, there are always reservations. However, we are committed to ensuring customer support during the transition. Items considered appropriate for DLA to manage at this time have been selected for transfer over the next 3 years. The remaining items are consumables for which statute or prudence demand continued Air Force management. A DLA/Air Force review of our rationale for retaining these items is part of the transfer.

Senator Dixon. Have there been any recent instances where the Defense Logistics Agency has not provided the support you needed for consumable items that it already manages?

General Tuttle. No, over the past year Army transferred approximately 20,000 items to the Defense Logistics Agency. In some cases, the Defense Logistics Agency has returned items to Army due to the items' complexity or technical requirements. But, this is the flexibility built into the transfer program. Overall, the support provided to the Army by the Defense Logistics Agency has complemented the readiness and sustainment of the U.S. Army.

General McDONALD. No. Air Force users have not reported any unusual support problems to our depot facilities.

QUESTIONS SUBMITTED BY SENATOR TRENT LOTT

LOGISTICS/SUPPLY SUPPORT TO DESERT SHIELD/STORM

Senator LOTT. General Tuttle, throughout your statement for the record you praise the Army logistics and supply infrastructure and the contributions they made to Desert Shield/Desert Storm.

Under the DMR consolidation plans, a number of these activities will be either eliminated, reduced, transferred and/or consolidated. What do you feel the impact will be on your service's ability to respond and support a Persian Gulf type operation in the future?

General TUTTLE. The Depot Maintenance Consolidation Plan, DMR 908, has proposed a number of workload consolidations to increase the capacity/utilization of all the service depots. AMC does not believe the results will impact our ability to respond to another Persian Gulf type operation. Our depots will keep the core maintenance capability in-house so that we can respond quickly to any emergency. We are consolidating our depot maintenance capabilities to correspond to the reductions of our force structure. A smaller force will need a smaller depot maintenance infrastructure to maintain the readiness of our forces.

Army supply support to Desert Shield/Desert Storm, exclusive of ammunition, was provided primarily from the Army Area Oriented Depot at New Cumberland, Pennsylvania and Red River Army Depot. New Cumberland transferred to the Defense Logistics Agency April 14, 1991. Defense Logistics Agency has committed to provide equal or better performance.

Senator LOTT. General Tuttle, last year and again this year, the services are being accused of excess spares and secondary items. Critics and the GAO say it will just get worse when you receive materiel back from the Persian Gulf region. What is your opinion of these charges and is there anything the Congress can do to help?

General TUTTLE. There were many valid reasons for the Army's secondary item inventory growth over the past few years. These reasons included: force modernization, inflation, and changes in retention policy.

The single largest contributing factor to the growth of Army secondary item inventory growth was the vast infusion of new weapon systems fielded as part of the force modernization effort. During the period of fiscal year 1984 to fiscal year 1989, the dollar value of end items in the inventory increased from $56 billion to $106.7 billion. Some examples of the expansion of the end item fleets supported by our secondary item inventory during the study period were a 469 percent increase in M-1 tanks, a 1,328 percent increase in Bradley Fighting Vehicles, a 158 percent increase in Blackhawk Helicopters, and the introduction of the Apache Attack Helicopter. In addition to the increased density of end items supported, the quantity of national stock numbered items required to support new and modified weapon systems during the modernization period increased the total items managed by 16,000. Another modernization driven cause for the increase of secondary item inventory was the displacement and retention, not disposal, of many replaced weapon systems and their related parts. As the new weapon systems were fielded, the displaced weapon systems were moved from the Active force to the Reserve component, war reserves, or retained for potential Foreign Military Sales. For example, the reconfiguration of the M60 series tank to the M60A3 generated $20 million in inapplicable inventory which was held for reserves, other services and foreign country support. In effect, the Army's need to simultaneously support older displaced weapon systems and new systems resulted in inventory growth.

Another reason for the increase in dollar value of the Army's secondary item inventory during the study period was the implementation of stringent retention policy contained in DOD Directive 4100.37. The directive required the retention of serviceable or economically reparable assets applicable to a weapon system in active use by U.S. forces. The purpose of this retention was to provide on-hand assets to fill unforecasted needs. A key point in analyzing inapplicable inventory is that assets held in retention categories are subject to being drawn rapidly into applicable strata during periods of demand fluctuation, and changes in operating schedules. DOD retention policy has now been modified to allow disposal of secondary items used in active inventory end items based upon management considerations.

The growth in our inapplicable inventory should not be viewed as "unrequired stocks". There are also valid reasons for retaining these inventories. One of these reasons is when making life-of-type buys. When a contractor no longer produces a part and that item cannot be obtained through other means, a procurement is made to enable us to support that end item through its life cycle. Other reasons are based on economic decision, when it is more cost effective to hold the item than to dispose of it and reprocure in 2 years, or to support Foreign Military Sales.

As cited earlier in my comments on the Supply System Inventory Report, the Army has made significant progress in reducing inapplicable wholesale secondary inventory. Significant achievements have been made in this area as part of the Army's implementation of the DOD Inventory Reduction Plan. We believe that the inventory will grow over the short term due to the Persian Gulf war. In order to support Operation Desert Storm, we estimated that the war would continue for 100 days. We did not expect that it would be completed in 100 hours. We will reutilize as much as possible of the secondary items being returned from Southwest Asia to fill previously unfunded war reserves. We will also maintain a small inventory in SWA to support residual forces. However, with the IRP, we will continue to reduce our inventories through management efficiencies.

O&M FUNDING

Senator Lott. General Tuttle, when does the Army feel they will obligate and expend the O&M funding needs with sources in the fiscal year 1991 Supplemental?

Would you recommend an extension of the availability of funds past September 30, 1991 for either all or parts of the O&M funds?

General Tuttle. We have recently submitted our updated requirements based on post war assumptions. The requirements for fiscal year 1991 were reduced because of the end of the conflict, but have increased because of the retrograde requirements for ammunition and equipment back to CONUS. The completion of this retrograde and the support of units still in SWA will require expenditures of funds past September 30, 1991.

For the reasons stated above Operation Desert Storm requirements will continue into fiscal year 1992.

Senator Lott. General Tuttle, are the Army O&M funds for fiscal years 1991-1993 based on the directed force structure levels in the fiscal year 1991 Appropriation and Authorization Acts or the relaxed levels?

If the relaxed levels, are the requested funds adequate to support activity levels requested?

General Tuttle. The Army O&M funds for fiscal years 1992-1993 are based on the directed force structure levels in the fiscal year 1991 Appropriation and Authorizations Acts and the projected force structure levels for fiscal years 1992-1993 in current Army plans. No adjustments to the fiscal years 1992-1993 President's budget request were made to account for any relaxed level or modified ramp down of the force based upon the Army's participation in Operation Desert Storm.

Senator Lott. General Tuttle, in relation to Desert Shield/Storm operations, are the additional training costs incurred going to be recovered as an incremental cost? If not, why not?

General Tuttle. Yes, additional training costs incurred will be recovered as an incremental cost.

INDUSTRIAL BASE

Senator Lott. General Tuttle, the size of the Army force is being reduced. The overhaul and modification actions may be reduced in concert with the smaller force and more reliable weapon systems. These statements would tend to justify a smaller infrastructure, fewer overhauls, and depot consolidations.

However, if you take these actions you restrict your ability to surge and react to regional and global conflicts.

How are you planning to balance and fund these ingredients to protect forces and support activities for future surge requirements?

General Tuttle. We are pursuing a depot consolidation and competition program. The result will be a reduction in the size and number of depots. The most efficient depots will be retained. Similarly we will retain our core manpower to accomplish the core workload. The depots will then compete with the private sector for work above the core level. The organization, operation and management structure of the depots will be streamlined and integrated into the Industrial Operations Command. The reduction in the number of depots will reduce our capability for repair and overhaul. However, requirements will be smaller. We are continuing to invest in research and development to leverage our technological superiorities. Some limited production for long lead systems will be sustained. Foreign Military Sales is expected to provide a measure of protection to the industrial base for tank production, Patriot and the Multiple Launch Rocket System. We are producing ammunition for war reserve in the future, and ammunition plants are being put in layaway status for possible future production needs or mobilization.

DMR INITIATIVE SAVINGS

Senator LOTT. General Tuttle, under the Defense Management Review (DMR) and subsequent report, large cuts were made in operation and maintenance (O&M) funding based on "projected savings" from depot consolidations and closures. But the "savings" appear to result almost entirely from less funds available, rather than management decisions generating savings which in turn could allow cuts in funding.

This is a classic example of taking credit for cuts disguised as savings.

In your opinion, are these consolidations and changes to the depots moving too fast?

General TUTTLE. Both the Defense Management Review and the world situation require the Depot Maintenance Community to reduce the Depot Maintenance Infrastructure. In my opinion, the Depot Maintenance Consolidations are on track with base closures and force reductions as defined in Base Realignment and Closure and Conventional Forces in Europe drawdowns.

Senator LOTT. Are there better ways to proceed in this very delicate build-down of the depot capabilities?

General TUTTLE. The process established by Mr. Atwood's memorandum of June 1990 and the establishment of the Defense Depot Maintenance Council are sound decisions and are the right course that we need to be on as our forces are being downsized worldwide.

Senator LOTT. Would you rather the cuts to operation and maintenance (O&M) depot funds be made based on proven savings or would you prefer the cuts, to meet budget targets, drive the resulting structure?

General TUTTLE. We agree that the cuts to the O&M depot funds should be made based on proven savings in lieu of cuts to meet budget targets which would be prior to implementation of the required actions. As currently planned, our funding will affect on our ability to maintain a balanced Depot Maintenance workload and fund the associated manyears in fiscal year 1993.

Senator LOTT. General Tuttle, a large degree of consolidation and grouping of support, construction, and personnel funding has been made at DOD level, after the individual services submitted their budgets. These funds have been placed in the Defense Business Operating Fund (DBOF).

When the budget requests are reviewed by Congress, we will examine the funds under both the original and grouped titles. It is not clear at this time how the funds will be authorized and appropriated. Do you have a preference on how the funds should be reviewed and reported back to your services?

General TUTTLE. Yes, we support the President's budget submission and would ask that the authorization be reported back to the Army as requested in the budget.

WAR RESERVE

Senator LOTT. General Tuttle, to meet ammunition, spare parts, and support needs of the Persian Gulf, the services contributed from their reserves. Have plans been made to ensure your service will eventually be restored with adequate quantities of these supply items to meet command taskings?

General TUTTLE. War reserves spares and other secondary item war reserve assets will be restored. For ammunition, the fiscal year 1991 Supplemental will eliminate production breaks caused by accelerations and/or return us to pre-ODS levels.

Senator LOTT. Will they be funded from the fiscal year 1991 Supplemental or from fiscal years 1992-1993 and outyear budget requests?

General TUTTLE. Spares and other secondary item war reserve assets issued to fill ODS requirements will be replenished through the fiscal year 1991 Supplemental and/or redistribution resulting from the restructured force. Munitions will be replaced by a combination of depot maintenance activities, fiscal year 1991 Supplemental funding and fiscal years 1992-1993 and outyear budget requests.

DMR CONSOLIDATION INITIATIVES' EFFORT ON READINESS

Senator LOTT. General Tuttle, the Army depended heavily on their maintenance and support activities during the Persian Gulf operations. Defense Management Review actions and personnel cuts will affect these support activities. Do you have an estimate of the potential impacts to the readiness and sustainability of the Army?

General TUTTLE. Readiness and sustainability of the Army will not be affected by the Depot Maintenance Consolidations in Defense Management Review Decision 908. Our plan is to consolidate workload and to eliminate duplicate operations. By consolidating workload, we will save spaces and increase the capacity/utilization at all service depots. Core logistics will not be affected. Army Materiel Command will always retain in-house the capability to maintain readiness objectives and sustain the Army in any future conflict.

In regard to depot supply consolidation, impacts to readiness and sustainability should be minimal. However, it must be pointed out that during Operations Desert Shield/Storm we augmented our personnel at New Cumberland Army Depot and other depots with additional military personnel plus temporary civilian hires as well as "buying back" a number of other depot civilians scheduled for release.

It is expected that similar actions would be necessary during any future crisis.

Senator LOTT. General Tuttle, under the budget submission and in concert with a large degree of consolidation trends, the Defense Logistics Agency (DLA) will be expanded to absorb them. Is the Army ready for the transfers and do you feel the DLA will be ready to receive them when required?

General TUTTLE. The Army transferred the Sharpe Area Oriented Depot (AOD) to DLA June 24, 1990. New Cumberland AOD was transferred to DLA on April 14, 1991, as well as the supply distribution functions at the Sacramento Army Depot.

Senator LOTT. General Tuttle, as more and more consolidation takes place, it is suspected that additional funds for construction, equipment, and people will be required. These have not shown up in the budget yet. Are all these additional costs of consolidation being considered when the analysis and decisions are made to consolidate activities and shut down the individual activities?

General TUTTLE. Consolidation activities directed by the Base Realignment and Closure Commission from 1988 have been included in the Army budget starting with fiscal year 1990 as a separate base closure account.

To date, the planned cost of consolidations directed by the Defense Management Review (DMR) process have been modest and will be covered out of planned savings to be realized by reductions in personnel costs and base operations/mission support costs.

The 1991 Base Realignment and Closure Commission (BRAC) actions to close installations and consolidate functions are more extensive and will require some additional funding to execute. Those BRAC actions will be funded from a separate DOD Base Closure Account.

Senator LOTT. General Tuttle, there remains some deal of debate as to whether the wholesale supply functions at the service depots should be transferred to the DLA. Lead times and stock levels would have to be adjusted to ensure depot activities are not impacted. What is the status of this transfer?

General TUTTLE. Sharpe Area Oriented Depot (AOD) transferred to DLA June 24, 1990. New Cumberland AOD transferred to DLA April 14, 1991, as did the supply distribution functions at the Sacramento Army Depot.

Senator LOTT. If transferred, can DLA meet depot delivery requirements?

General TUTTLE. DLA is committed to provide equal or better depot performance and support to service readiness.

IMPACT OF CONSOLIDATIONS ON FUTURE OPERATIONS

Senator LOTT. General McDonald, throughout your statement for the record you praise the Air Force logistics and supply infrastructure and the contributions they made to Desert Shield/Desert Storm. Under the consolidation plans, a number of these activities will be either eliminated, reduced, transferred and/or consolidated. What do you feel the impact will be on your services' ability to respond and support a Persian Gulf type operation in the future?

General MCDONALD. I am confident that the Air Force logistics community will be able to support any foreseeable contingency in the future. The excellence of the Air Force logistics infrastructure depends more on the excellence of the men and women who make it work than on any other factor. I believe that whatever the environment, Air Force logisticians will excel. This is not to say that I am not concerned. We have moved very far and very fast with the initiatives. There are a number that are interrelated. The magnitude of change in the logistics world is such that it is difficult to forecast exactly the impact of all of the changes that are taking place.

As far as consolidation is concerned, the people who performed so well in support of Desert Shield/Storm for the Air Force will, I am sure, perform just as well for another service or for the Defense Logistics Agency. The same should be true for the consolidation of like types of depot maintenance workloads. Reductions or eliminations, if taken with care and thought, should not prevent us from providing the same quality of support in the future that we provided in the past.

IMPACT OF PERSIAN GULF OPERATIONS ON SPARES AND SECONDARY ITEM INVENTORIES

Senator LOTT. General McDonald, last year and again this year, the services are being accused of excess spares and secondary items. The critics and the GAO say it will just get worse when you receive materiel back from the Persian Gulf region. What is your opinion of these charges and is there anything the Congress can do to help?

General McDONALD. Frankly, as the Air Force reduces from our 1990 level of 36 wings to 26 wings by 1995, we anticipate a growth in potential excess assets. From a period of full requirement funding during the 1980s to a phase down in the 1990s, this changing environment is going to affect our on-hand inventories. For example, we currently plan to retire the A-7s, the F-4s, most of the A-10s, and the older model F-111 aircraft. These actions will probably increase current levels of excess spares. We hope Congress will understand that these changes will be reflected in our inventory position. For this reason, materiel returning from the Persian Gulf for older weapon systems may be among those items in our potential excess inventories in the future.

FISCAL YEAR 1991 SUPPLEMENTAL

Senator LOTT. General McDonald, when does the Air Force feel they will obligate and expend the O&M funding needs with sources in the fiscal year 1991 Supplemental?

General McDONALD. We are prepared to begin executing Supplemental funding upon receipt and continue through the end of the fiscal year. In order to meet Desert Storm requirements, we borrowed heavily from our 4th quarter funding and will restore these accounts first. Once these accounts are restored, the remaining funds will be applied against the prioritized operating requirements and shortfalls generated as a result of our Desert Shield/Storm support. With funding anticipated before our go-broke date (July 1991), sufficient time should be available to restore the borrowed funding and meet ongoing operating requirements. We do not anticipate the need to extend the availability of these O&M funds past September 30, 1991.

Senator LOTT. Would you recommend an extension of the availability of funds past September 30, 1991 for either all or parts of the O&M funds?

General McDONALD. If restoration of funds to the Command occurs on a timely basis, an extension probably will not be necessary. However, the process of accurately scoping requirement and obligating funds to the best advantage is complex and time-consuming. Therefore, it would seem prudent to provide some extension of life for O&M funds to be applied to Desert Storm requirements. Having this option available would certainly be useful to my field commanders and their staff as they work to restore the Air Force's ability to sustain combat operations.

O&M ADEQUACY OF FUNDING

Senator LOTT. General McDonald, are the Air Force O&M funds for fiscal years 1992-1993 based on the directed force structure levels in the fiscal year 1991 Appropriation and Authorization Acts or the relaxed levels? If the relaxed levels, are the requested funds adequate to support activity levels requested?

General McDONALD. The current Air Force O&M budget request is based on the approved fiscal year 1991 decisions (i.e., not the "relaxed" levels) to continue on a programmed trend to reach the fiscal year 1997 stated force structure goals.

OVERSEAS MAINTENANCE FACILITIES/CONTRACTS

Senator LOTT. General McDonald, what is your recommendation for having forward overseas maintenance facilities and contracts to support U.S. deployments, either fulltime or emergency actions, such as the Persian Gulf operations?

General McDONALD. The ability of the theater commanders to carry out their peace and wartime missions is highly dependent on responsive logistics support. This has driven AFLC to actively seek the right mix of support to provide to the European and Pacific theaters. This mix is tempered by cost, the theater's future force structure, and the availability of other alternatives.

The AFLC mission is to support the peacetime readiness and wartime sustainability of the operating commands. In the European and Pacific theaters, this mission is best accomplished by a continued AFLC presence. Additionally, the AFLC overseas capability increases in-theater readiness to respond to contingencies such as the Persian Gulf operation.

Stand-alone overseas organic depot-level facilities are expensive and should be considered when justified by economy or by the length of the support pipeline. Furthermore, it becomes difficult to justify such facilities given the diminishing workload at the CONUS depots and the increasing technological capabilities of the overseas contractors.

Use of overseas contractors for airframe and engine workloads continues to offer benefits to the Air Force. Overseas contracts promote a foreign technical base which can be tapped during peace and which may become essential during a protracted war. In-theater repair of aircraft and engines also saves the time and cost of shipping the items to and from CONUS.

Adjustment to in-theater supplies of select exchangeable items and use of in-theater contractors to repair certain high demand or short supply items provides a great opportunity for providing economic in-theater support.

The AFLC Overseas Workload Program was designed to enhance support to USAFE and PACAF during peace and during their rigorous wartime scenarios. Supporting actions such as the Persian Gulf operation is a departure from these planned scenarios, but preparation for them prepares the Command to support emergency actions, such as Desert Storm.

COSTS OF ADDITIONAL TRAINING

Senator LOTT. General McDonald, in relation to Desert Shield/Desert Storm operations, are the additional training costs incurred going to be recovered as an incremental cost? If not, why not?

General McDONALD. AFLC costs have been identified and included in the Supplemental. This included anticipated incremental costs to support Desert Shield/Storm. We have reported the incremental costs incurred in strict compliance with Air Force and DOD instructions. We have documented, reviewed, and validated these reported costs to ensure they met the guidance provided by OSD.

IMPACT ON DOWN-SIZING OF SUPPORT

Senator LOTT. General McDonald, the size of the Air Force is being reduced. The overhaul and modification actions may be reduced in concert with the smaller force and more reliable weapon systems. These statements would tend to justify a smaller infrastructure, fewer overhauls, and depot consolidation. However, if you take these actions you restrict your ability to surge and react to regional and global conflicts. How are you planning to balance and fund these ingredients to protect forces and support activities for future surge requirements?

General McDONALD. I agree with you on the importance of our meeting surge requirement's and logistically supporting the Air Force. Failure to do so is unacceptable in peace or war. For this reason, we are very sensitive to how we become a leaner logistics community. We are looking hard at how we maintain the proper amount of infrastructure to accomplish the mission. Regarding surge, we have implemented the policy of maintaining the core workload for each weapon system in the depots. Core workload will not be competed and represents the minimum amount of work required for the depots to maintain the critical skills required to assure the readiness and sustainability of our fighting forces. To complement the reduced size of the Air Force and meet financial realities, we are also downsizing our organic depot maintenance operations. Downsizing is a low cost option with minimum upfront costs and the best net payback. In addition, it allows us to be selective in what we retain and improves our posture for workload competition in the future. These methods allow us to balance our Air Force mission requirements with a changing DOD environment.

DMR SAVINGS

Senator LOTT. General McDonald, under the Defense Management Review (DMR) and subsequent report, large cuts were made in operation and maintenance (O&M) funding based on "projected savings" from depot consolidations and closures. But the "savings" appear to result almost entirely from less funds available, rather than management decisions generating savings which in turn could allow cuts in funding. This is a classic example of taking credit for cuts disguised as savings. In your opinion, are these consolidations and changes to the depots moving too fast? Are there better ways to proceed in this very delicate build-down of the depot capabilities? Would you rather the cuts to O&M depot funds be made based on proven savings or would you prefer the cuts, to meet budget targets, drive the resulting structure?

General McDONALD. The consolidations and changes are occurring at a pace required by the new DOD environment. We cannot control the outside forces which are affecting the DOD. The Air Force has been given the opportunity to play a major role in how we implement these changes to our depot system. In addition, many of the required savings are in areas that we had been pursuing prior to DMRD 908. For example, AFLE has realized greater efficiency through implementation of our Logistics Modernization Systems which improves our processes by reducing costs in the areas of equipment, inventories, and supplies in depot maintenance.

Because we play a major role in determining how to build-down depot capabilities, we are proceeding in a manner ~~that is~~ in the best interests of the Air Force and the DOD. We continue to look for new ideas and each service is sharing information on how to improve depot maintenance operations.

CONGRESSIONAL REVIEW OF DBOF

Senator LOTT. General McDonald, a large degree of consolidation and grouping of support, construction, and personnel funding has been made at the DOD level, after the individual services submitted their budgets. These funds have been placed in the Defense Business Operating Fund (DBOF). When the budget requests are reviewed by Congress, we will examine the funds under both the original and grouped titles. It is not clear at this time how the funds will be authorized and appropriated. Do you have a preference on how the funds should be reviewed and reported back to your services?

General McDONALD. I would think that reviewing the budget request using both the original and DBOF categories would be especially challenging and given the decision to operate under the DBOF concept, might not be worth the effort entailed. The manner in which the funds are reported back to the services would, of course, be of significant interest to us.

However, I believe the most important consideration is to be sure that the appropriate level of funding is provided in the budget regardless of the method of review. This has implications for both our customers and the Air Force Logistics Command. If funding levels are insufficient, our customers will only be able to purchase a limited level of goods and services—this will affect their mission capability. Under these circumstances, we would also be adversely affected since we would not be making sufficient sales to replenish the DBOF and thus would be unable to finance the cost of a stable workforce and/or replenish the stockage levels necessary to support the future operations of our customers, i.e., the warfighting commands. The issue of maintaining workforce stability and associated expertise is of particular concern to us.

RECONSTITUTION POST DESERT SHIELD/STORM

Senator LOTT. General McDonald, to meet the ammunition, spare parts, and support needs of the Persian Gulf, the services contributed from their reserves. Have plans been made to ensure your service will eventually be restored with adequate quantities of these supply items to meet command taskings?

General McDONALD. For spares, some weapon systems will not require restoral of reserves due to the decline in the force structure (i.e., A-10 and, to some extent F-4 variants). For other weapon systems with stable or increasing force structure, restoral of reserves will depend upon the return of the units, a review of Desert Shield/Storm consumption, and the reestablishment of normal accounting procedures. Policy for the redistribution of peacetime stocks used to augment deployable wartime reserve kits has already been provided to field units.

For munitions, my staff co-hosted a conference with HQ USAF, April 2-4, 1991 to address this subject. The Air Staff will assess the worldwide munitions inventory posture following the 1992-1999 non-nuclear consumable annual analysis process.

Senator LOTT. Will they be funded from the fiscal year 1991 Supplemental or from fiscal years 1992-1993 and outyear budgets requests?

General McDONALD. Shortfalls not included in the fiscal year 1991 Supplemental will be addressed during the outyear budget process.

DEFENSE MANAGEMENT REVIEW-IMPACT ON READINESS

Senator LOTT. General McDonald, the Air Force depended heavily on their maintenance and support activities during the Persian Gulf operations. Defense Management Review (DMR) actions and personnel cuts will affect these support activities. Do you have an estimate of the potential impacts to the readiness and sustainability of the Air Force?

General McDonald. While we cannot specifically quantify the potential impacts of DMR actions and personnel cuts on Air Force readiness and sustainability at this time, we are doing everything possible to minimize negative impacts by improving our efficiency and output product quality. We support the DMR goals aimed at streamlining the forces and reducing Defense spending.

Caution must be practiced regarding how and where the budget cuts are taken. Some cuts, such as those taken to reduce depot repair capacity and our ability to increase production, will have to be analyzed very carefully. During Desert Storm our ability to provide support was dependent upon the capacity and capability of our depots to surge and repair items needed by the deployed units. It must retain funding levels that maintain a critical mass of skilled personnel and the core capabilities to enable us to meet the requirements of contingency operations such as Desert Storm.

As we move into a broader stock funding environment, it is critical that we obtain sufficient funding to support our exchangeable repair requirements, and our customer MAJCOMs must be provided with adequate funds to purchase the serviceable items from AFLC. If we do not, we will be unable to maintain aircraft in a mission capable status, and our future sustainability and readiness will decline.

CONSUMABLE ITEM TRANSFER

Senator Lott. General McDonald, under the budget submission and in concert with a large degree of consolidation trends, the Defense Logistics Agency (DLA) will be expanded to absorb them. Is the Air Force ready for the transfers and do you feel the DLA will be ready to receive them when required?

General McDonald. Air Force preparations for the Consumable Item Transfer are complete and data transfer began on May 1, 1991. Since it takes approximately 150 days to migrate all the necessary management data records, DLA will not begin accepting management responsibility for the first group of items until October 1, 1991. We have worked closely with DLA to ensure this transfer goes smoothly and DLA will be ready to accept management responsibility by the October 1 target date.

COSTS OF CONSOLIDATION DMRS

Senator Lott. General McDonald, as more and more consolidation takes place, it is suspected that additional funds for construction, equipment, and people will be required. These have not shown up in the budget yet. Are all of these additional costs of consolidations being considered when the analysis and decisions are made to consolidate activities and shut down the individual activities?

General McDonald. The basic presumption of those Defense Management Review Decisions that recommend consolidation is that there will be a lesser requirement for funds for construction, equipment, and people in the aggregate. There should be no need for additional funds for construction. There may be a requirement to shift people and equipment from some locations to others, but in total there should be a reduction in the need for both people and equipment. The savings projected are a net savings taking into account any projected costs associated with achieving the consolidation.

IMPACT OF TRANSFER OF WHOLESALE SUPPLY FUNCTIONS TO DLA

Senator Lott. General McDonald, there remains some deal of debate as to whether the wholesale supply functions at the service depots should be transferred to the DLA. Lead times and stock levels would have to be adjusted to ensure depot activities are not impacted. What is the status of this transfer? If transferred, can DLA meet depot delivery requirements?

General McDonald. The first of the Air Force wholesale supply functions was transferred to DLA in the Bay Area Prototype on April 21, 1991. The wholesale supply and transportation function at Sacramento Air Logistics Center (ALC) became a part of DLA's Defense Distribution Region West. The function at Ogden ALC is to merge with DLA's Defense Depot Ogden, Utah on October 1, 1991. The supply depot functions at Warner Robins ALC, San Antonio ALC, and Oklahoma ALC are scheduled to transfer in June, July, and August 1992, respectively.

In the near-term, DLA will be operating in facilities that formerly belonged to the Air Force with people who formerly worked for the Air Force using Air Force-owned and developed computer systems. Consequently, I do not expect to see any immediate change in performance. In the long-term, DLA will convert to a standard Department of Defense supply system. In any case, the Director of the DLA and I have signed a Memorandum of Agreement in which DLA is committed to provide the Air Force service that is equal to or better than that which the Air Force provides to itself. I have no reason to doubt DLA's ability to meet the provisions of the Memorandum of Agreement.

[Whereupon, at 3:40 p.m., the hearing was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

WEDNESDAY, APRIL 24, 1991

U.S. Senate,
Subcommittee on Readiness,
Sustainability and Support,
Committee on Armed Services,
Washington, DC.

ARMY AND AIR FORCE AMMUNITION PROGRAMS

The subcommittee met, pursuant to notice, at 2:07 p.m., in room SR-222, Russell Senate Office Building, Senator Alan J. Dixon (chairman of the subcommittee) presiding.

Committee members present: Senators Dixon and Thurmond.

Professional staff members present: Robert E. Bayer and David S. Lyles.

Minority staff members present: Ronald P. Kelly and George W. Lauffer, professional staff members.

Staff assistant present: Mary J. Kampo.

Committee members' assistants present: Charles C. Smith, assistant to Senator Dixon, Terence M. Lynch, assistant to Senator Shelby, Samuel D. Adcock, assistant to Senator Lott, Ross Lindholm, assistant to Senator Mack, and Gary D. Reese, assistant to Senator Johnston.

OPENING STATEMENT OF SENATOR ALAN J. DIXON, CHAIRMAN

Senator Dixon. Ladies and gentlemen, the Subcommittee on Readiness, Sustainability and Support meets today to continue our hearings on the fiscal years 1992-1993 defense authorization request.

This afternoon, we will hear testimony on Army and Air Force ammunition programs. The conventional ammunition production base in this country is made up of a partnership of both government-owned and private sector manufacturing facilities. Even with the dramatic changes in the Soviet Union and Eastern Europe, Operation Desert Storm reminded us how important it is to our national security to maintain an innovative and responsive ammunition production base in this country.

Maintaining this production base is becoming increasingly difficult as we reduce the level of defense spending and the size of our military forces. We hope our witnesses today can tell us how we can address this problem in the coming years.

We have two panels of witnesses this afternoon. the first from the Department of Defense and the second from the private sector. Our Defense Department witnesses are Brigadier General William Schumacher, the Army's Deputy for Ammunition, and Major General James Hopp, the Air Force Director of Supply in the Office of the Deputy Chief of Staff for Logistics.

Senator Lott and I asked our Defense Department witnesses to address their consumption of ammunition during Operation Desert Storm and their plans for replacement of this ammunition, and then to outline their fiscal years 1992-1993 ammunition budget request. We also asked them to give us their views on the overall health of the ammunition production base in this country.

Gentlemen, we welcome you to the subcommittee, and we appreciate your being here today. Your full statements will be included in the record, of course, and we will have questions after you have given your oral testimony.

We will have a brief closed session after we receive the testimony of the second panel. I would like to recall our first panel after the witnesses from the private sector testify for any comments they may have on the second panel's testimony. We will then go into executive session to cover some classified issues.

Before the witnesses begin, let me recognize my friend, the distinguished senior Senator from South Carolina, in the event that he has any opening statement. We are delighted to have you here, Senator Thurmond.

Senator THURMOND. Mr. Chairman, I want to congratulate you for holding this hearing. I think it is a very important hearing. I have got to go to the White House and will have to leave in about 5 minutes. I would ask that my questions be answered for the record, and I will ask unanimous consent that my opening statement follow your opening statement in the record.

Senator DIXON. I thank my friend, the distinguished senior Senator from South Carolina.

[The prepared statements of Senator Thurmond and Senator Lott follow:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Mr. Chairman: I want to take a moment to recognize you and the ranking subcommittee member, Senator Lott, for your leadership of this very important subcommittee. As you have pointed out on several occasions, the Readiness Subcommittee allocates approximately 35 percent of the defense budget and impacts on virtually all aspects of our Nation's military structure. During this session, you and Senator Lott have already focused hearings on several key issues, but none as important as today's hearing on ammunition and, in particular, on the ammunition defense industrial base.

Mr. Chairman, for the past several years I have voiced my concern that one of the weak links in our defense production base is the loss of government and private ammunition production facilities. Over the past 5 years, funding for conventional ammunition has declined by approximately 50 percent. These cuts have had a significant impact on our ammunition producers who unlike other manufacturers, cannot turn to commercial markets to maintain production and earnings during lean years.

We should all remember the ammunition shortages we experienced during the Korean war, Vietnam and, to some extent, the Persian Gulf crisis, when we bought tank ammunition from Germany and attempted to buy other stocks from the Dutch. Our Nation should never again be caught short in this critical area and I hope this subcommittee will take the initiative so as to never let it happen again.

Mr. Chairman, I want to join you in your welcome to General Schumacher and General Hopp. Both officers are wrestling with the vexing problem of providing the correct type and quantity of ammunition to our fighting forces as our defense budget declines.

I also want to extend a warm welcome to Mr. Allen, Mr. Appleman, and Mr. Catani. I look forward to hearing their views on the status of ammunition production base.

Thank you, Mr. Chairman.

PREPARED STATEMENT BY SENATOR TRENT LOTT

Thank you Senator Dixon. I too would like to welcome the witnesses to this hearing today on the Army and Air Force ammunition procurement programs for fiscal years 1992-1993 and Desert Shield/Desert Storm munitions support.

Much of the success we enjoyed in the Desert Shield/Desert Storm operation was due to past training policies along with readiness and sustainability ammo investments. We are now going to reverse a great deal of these actions in fiscal year 1992 and beyond. With the low funding levels for ammo in fiscal year 1992 and fiscal year 1993, we must choose between readiness and sustainability emphasis. We are told cannot afford both.

The current ammo plants and infrastructure were major contributors to the Persian Gulf successes. These organizations will be substantially reduced within the next 2 to 3 years. These actions will reduce our ability to surge and to meet future operations, like the Persian Gulf.

Munition expended during Desert Shield/Desert Storm should be included in the justification for the fiscal year 1991 supplemental funding. This may not be entirely true. From the statements for the record the requested funds are actually less than expended and concentrated on newer, modern munitions. Older munitions are not being replaced at this time.

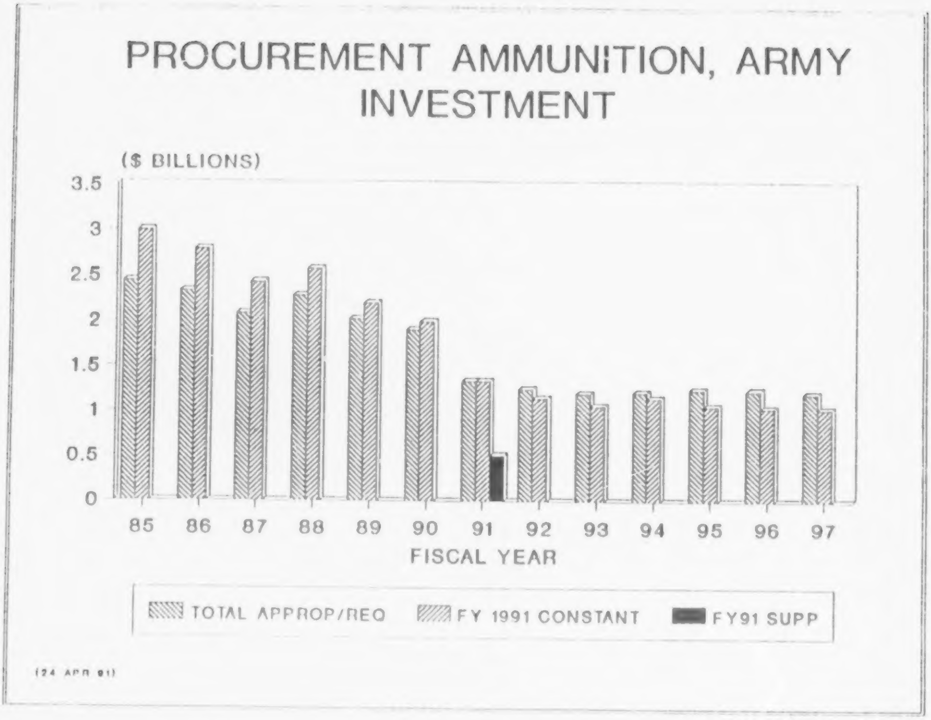
It appears unlikely that the supplement funds can be obligated and/or expended by September 30, 1991. Extension of this date should be discussed as soon as possible. This is an issue which will be addressed during the hearing today.

I look forward to the witnesses statements and questions to follow.

Senator Dixon. General Schumacher, please begin. We are delighted to have you here today.

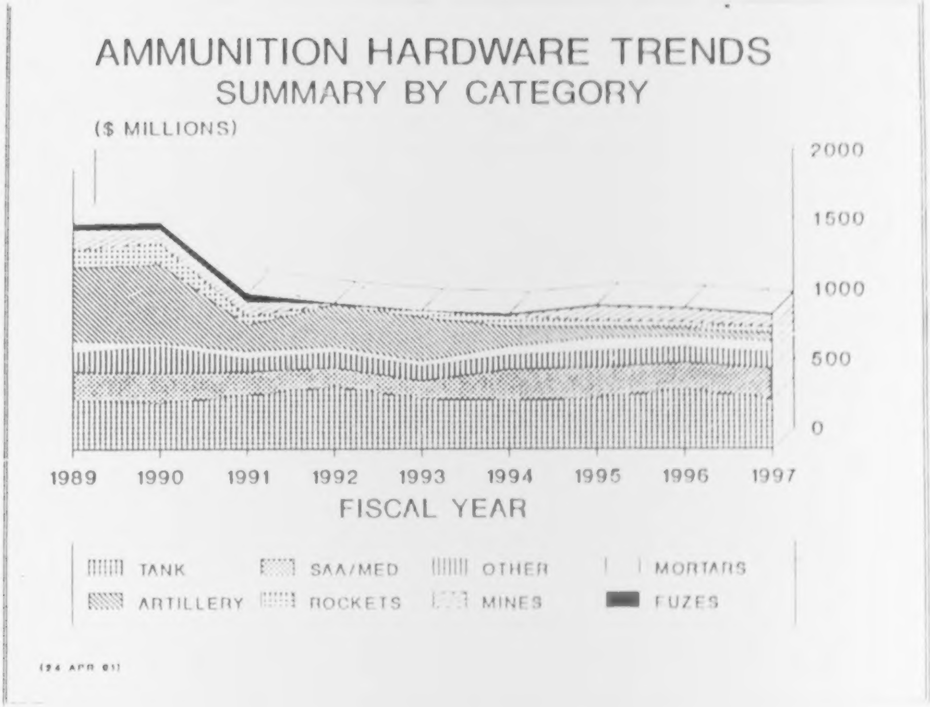
STATEMENT OF BRIG. GEN. WILLIAM J. SCHUMACHER, USA, DEPUTY FOR AMMUNITION, DEPARTMENT OF THE ARMY

General Schumacher. Thank you, sir. Mr. Chairman and distinguished members of the committee, thank you for the opportunity to testify today on the Army's ammunition fiscal years 1992 and 1993 procurement budget.



Historically, the ammunition budget has been approximately $2 billion or higher, but the 1991 conventional ammunition procurement budget, the lowest experienced in many years, dropped to approximately $1.3 billion. If one looks at this in terms of constant fiscal year 1991 dollars, you will notice that the budget has dropped from $3 billion in fiscal year 1985 to approximately $1 billion by fiscal year 1993, and then generally remains at that level of $1 billion in the out-years.

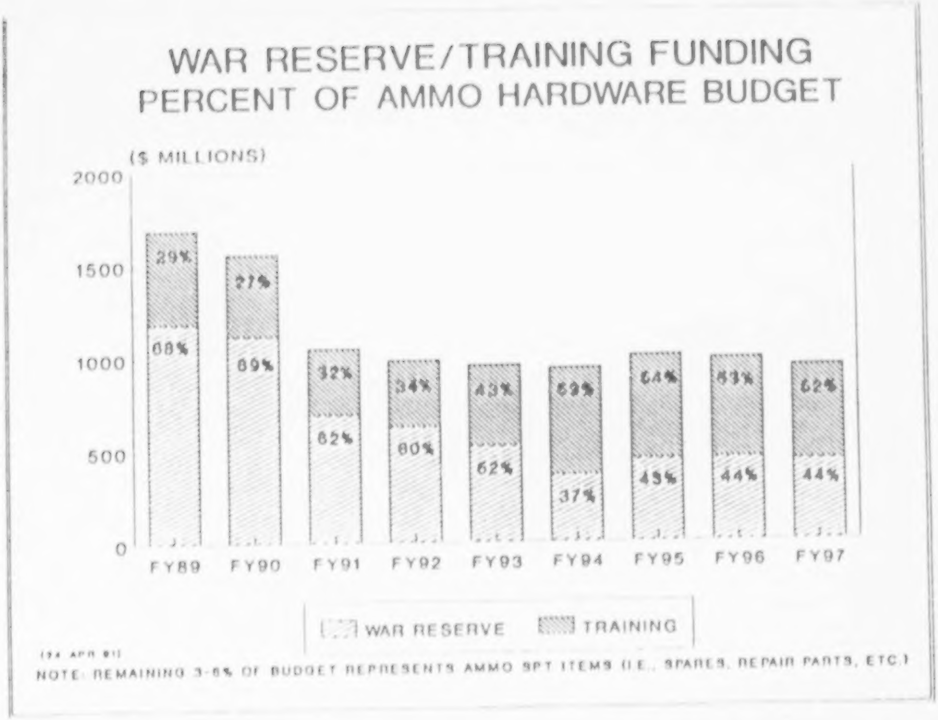
Also I have added to this chart the Desert Storm supplemental in fiscal year 1991, which is an amount of $509 million.



AMMUNITION HARDWARE TRENDS
SUMMARY BY CATEGORY

(24 APR 91)

The largest portion of our ammunition budget in 1992 and 1993 and the out-years is for one of our highest priority items, namely, tank ammunition. You see that in blue at the bottom of the chart. The small and medium-caliber area remains relatively constant throughout the budget. Funding for mortars increases gradually as we field the new 120mm mortar ammunition system. We will also make a substantial investment in extended range artillery projectiles, although by fiscal year 1994, funding for artillery drops to only the SADARM program. Finally, funding for mines begins to increase in 1995, as we procure additional volcano and other mine systems.



WAR RESERVE/TRAINING FUNDING
PERCENT OF AMMO HARDWARE BUDGET

(24 APR 91)
NOTE: REMAINING 3-6% OF BUDGET REPRESENTS AMMO SPT ITEMS (I.E., SPARES, REPAIR PARTS, ETC.)

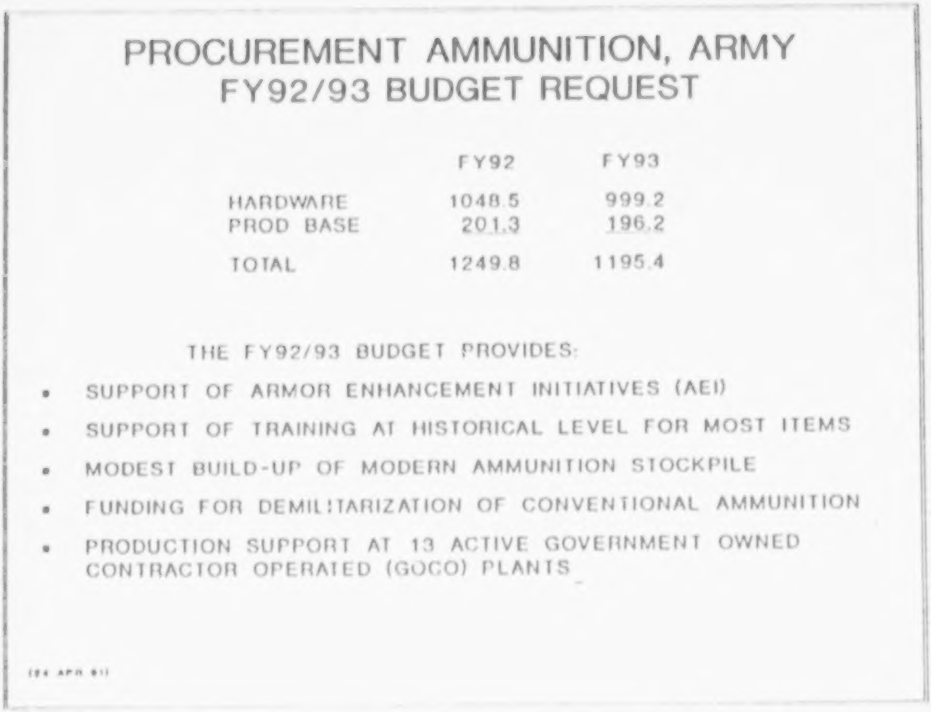
Our ammunition hardware budget can also be described in the terms of the way we use the ammunition. Shown on this chart in green and in blue are the war reserve and training portions, respectively. You will notice that there has been a shift in that area. In fiscal year 1989, about two-thirds of our budget was used to procure war reserve ammunition and a third for training.

By 1994, this will have reversed, and a greater portion of our budget will go to training than to war reserve. This shift is due to our continual emphasis on near-term readiness, and also driven by the higher cost of training ammunition to support our newer weapons systems such as the M1A1 tank system.

Sir, now I would like to turn and look in a little greater detail on the fiscal years 1992-1993 budget request. As our ammunition dollars have declined, we have placed emphasis on modernizing our war reserve stockpile and on our near-term readiness for training.

To that end, we are procuring new tank rounds developed under what is called the armor enhancement initiative—AEI. Second, we support most training at 100 percent of the historical levels, and third, we modernize our stockpile for artillery rounds with the procurement of extended range ammunition.

Next—and this is a new item in the 1992 budget request—is the funding of conventional ammunition demilitarization, and that also shows up in the fiscal year 1993 budget.



PROCUREMENT AMMUNITION, ARMY
FY92/93 BUDGET REQUEST

	FY92	FY93
HARDWARE	1048.5	999.2
PROD BASE	201.3	196.2
TOTAL	1249.8	1195.4

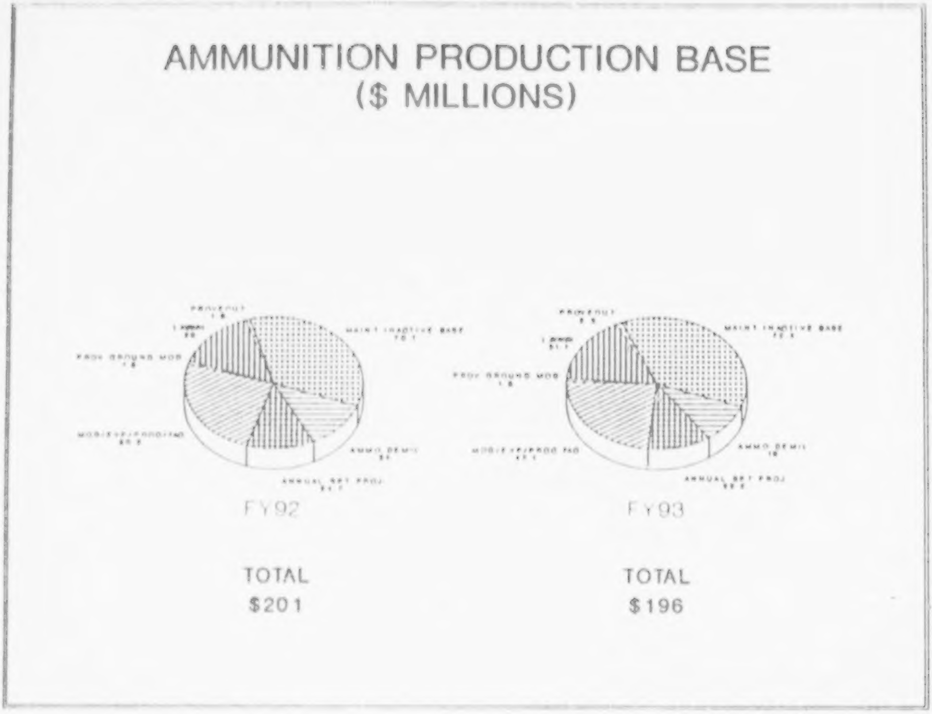
THE FY92/93 BUDGET PROVIDES:

- SUPPORT OF ARMOR ENHANCEMENT INITIATIVES (AEI)
- SUPPORT OF TRAINING AT HISTORICAL LEVEL FOR MOST ITEMS
- MODEST BUILD-UP OF MODERN AMMUNITION STOCKPILE
- FUNDING FOR DEMILITARIZATION OF CONVENTIONAL AMMUNITION
- PRODUCTION SUPPORT AT 13 ACTIVE GOVERNMENT OWNED CONTRACTOR OPERATED (GOCO) PLANTS

(24 APR 91)

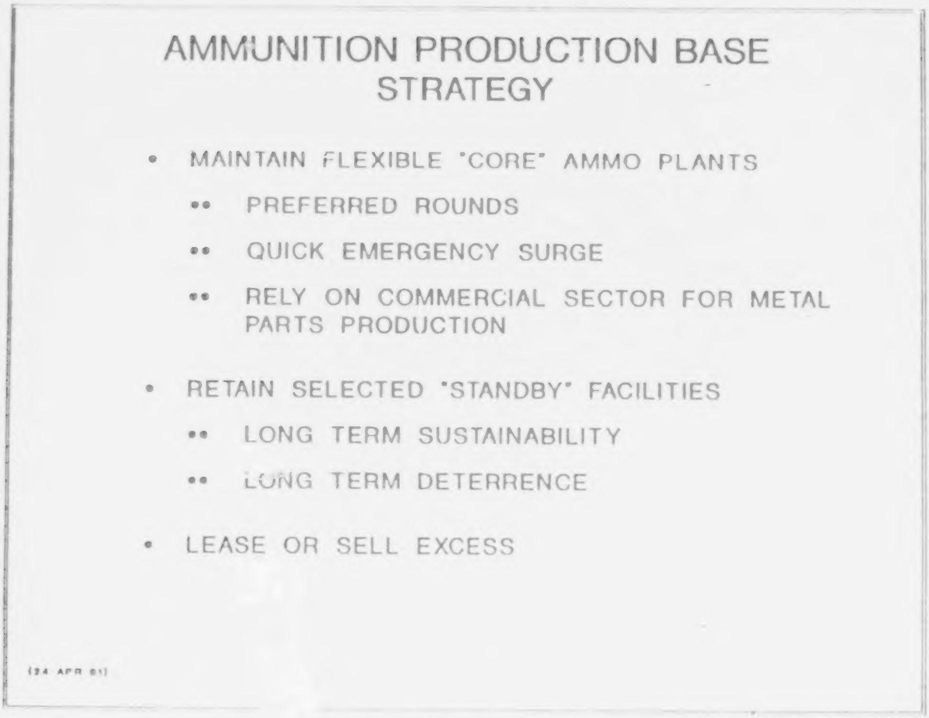
I should point out that the fiscal years 1992 and 1993 budgets do support maintaining 13 of the GOCO, or government-owned contractor-operated plants. In the out-years, as I will discuss later, that is not possible.

Looking at the next chart, the other portion of our budget deals with production base. This part of our request corrects safety and environmental deficiencies, and replaces equipment at various plants. It also supports, as I mentioned earlier, the conventional ammo demilitarization. In addition it provides lay-away of active lines no longer required for peacetime and maintenance of those inactive lines.



AMMUNITION PRODUCTION BASE
($ MILLIONS)

Now, you may remember from an earlier chart that production-base dollars remain fairly constant over all the years. But I have to point out that, starting in 1992–1993, for the first time about 50 percent of those dollars are for two new items, namely, the maintenance of the inactive facilities and the demilitarization of those conventional rounds that we no longer need or are obsolete. So there is a key cultural shift in terms of what we are using those dollars for.



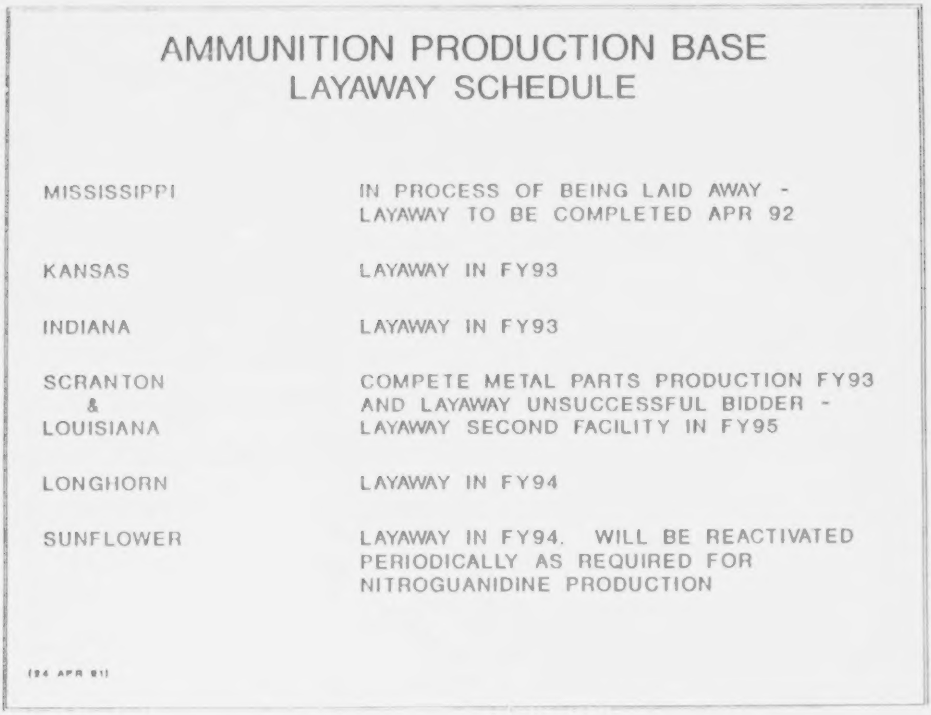
AMMUNITION PRODUCTION BASE STRATEGY

- MAINTAIN FLEXIBLE "CORE" AMMO PLANTS
  - PREFERRED ROUNDS
  - QUICK EMERGENCY SURGE
  - RELY ON COMMERCIAL SECTOR FOR METAL PARTS PRODUCTION
- RETAIN SELECTED "STANDBY" FACILITIES
  - LONG TERM SUSTAINABILITY
  - LONG TERM DETERRENCE
- LEASE OR SELL EXCESS

(24 APR 91)

With regard to our closure plans, the down-sizing of our production base is based on the following strategy. We plan to maintain a core of ammunition plants that are flexible, such that we can continue production of preferred rounds and provide a capability for quick emergency surge. This strategy also relies on the use of the commercial sector for metal parts production. We will, however, retain selected facilities for items no longer in production in case they are needed in future years.

Last but not least, those facilities that are not needed for mobilization will be leased or sold

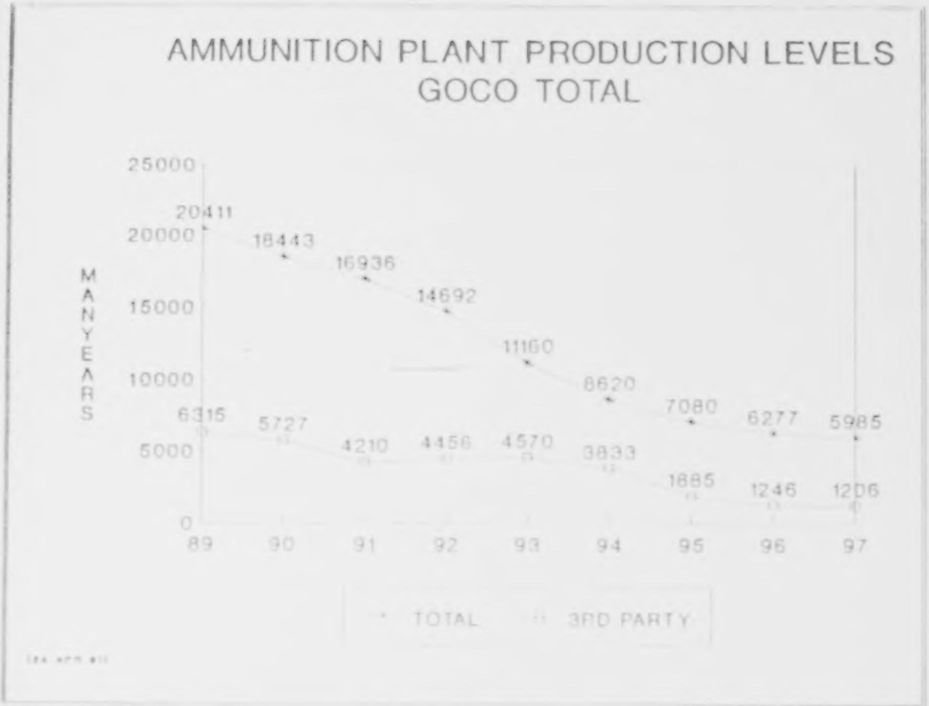


AMMUNITION PRODUCTION BASE LAYAWAY SCHEDULE

MISSISSIPPI	IN PROCESS OF BEING LAID AWAY - LAYAWAY TO BE COMPLETED APR 92
KANSAS	LAYAWAY IN FY93
INDIANA	LAYAWAY IN FY93
SCRANTON & LOUISIANA	COMPETE METAL PARTS PRODUCTION FY93 AND LAYAWAY UNSUCCESSFUL BIDDER - LAYAWAY SECOND FACILITY IN FY95
LONGHORN	LAYAWAY IN FY94
SUNFLOWER	LAYAWAY IN FY94. WILL BE REACTIVATED PERIODICALLY AS REQUIRED FOR NITROGUANIDINE PRODUCTION

(24 APR 91)

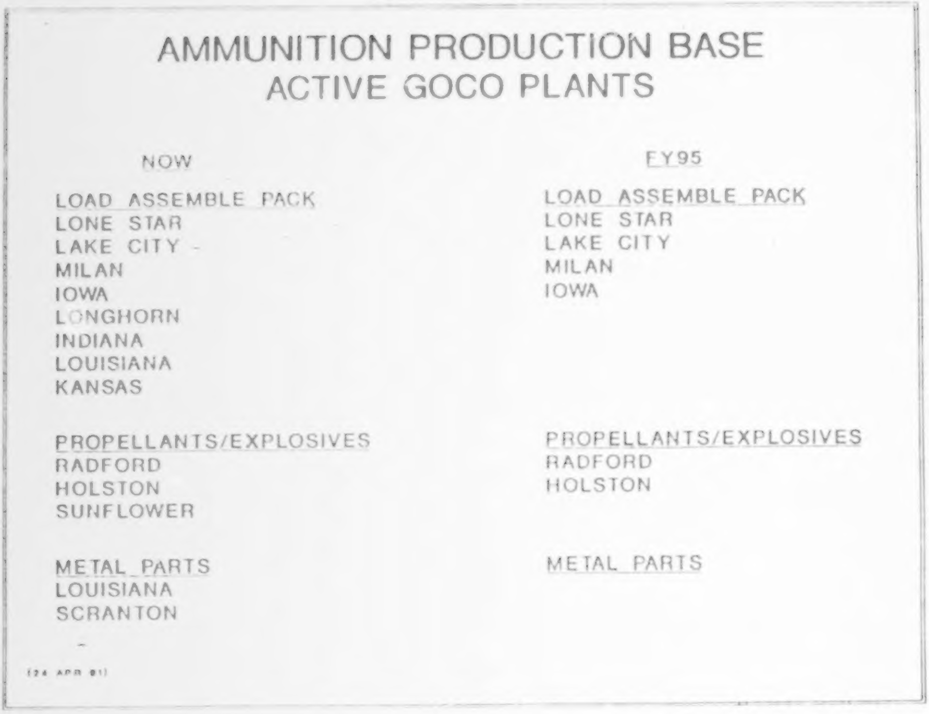
As a result of the declining budget and the strategy that I just outlined, seven government-owned, contractor-operated plants will no longer be work-loaded by fiscal year 1995. While these plants will no longer be active, they will be retained for mobilization, and as the chart portrays, Mississippi is the first of those seven that will be laid away. That process is already underway, and it is scheduled to be completed by fiscal year 1992.



AMMUNITION PLANT PRODUCTION LEVELS
GOCO TOTAL

Now, based on our out-year funding and those plant closures, our work force levels at those plants will decrease as shown on this chart. The total man-years at GOCO facilities will drop from approximately 20,000, which we had in fiscal year 1989, to less than 6,000 by fiscal year 1997.

This chart also portrays that portion associated with what we call third-party work-loading, where contractors at these plants are working as subcontractors to a prime.

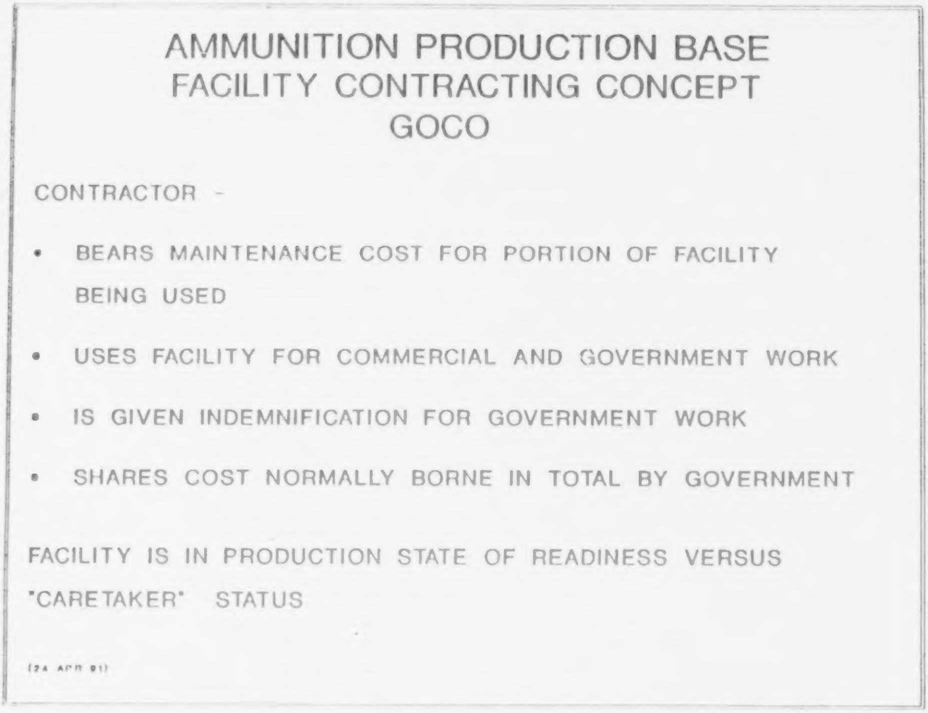


AMMUNITION PRODUCTION BASE
ACTIVE GOCO PLANTS

NOW	FY95
LOAD ASSEMBLE PACK	LOAD ASSEMBLE PACK
LONE STAR	LONE STAR
LAKE CITY	LAKE CITY
MILAN	MILAN
IOWA	IOWA
LONGHORN	
INDIANA	
LOUISIANA	
KANSAS	
PROPELLANTS/EXPLOSIVES	PROPELLANTS/EXPLOSIVES
RADFORD	RADFORD
HOLSTON	HOLSTON
SUNFLOWER	
METAL PARTS	METAL PARTS
LOUISIANA	
SCRANTON	

(24 APR 91)

Now, if one then compares what we have today, versus what we will have by fiscal year 1995, you will see that the two major areas where we will be reducing active plants is in the load, assemble, and pack, and in metal parts manufacturing. We still will retain basically what we had for propellants and explosives, and we will maintain four of the load, assemble and pack plants for the items that we plan to procure in the out-years.



AMMUNITION PRODUCTION BASE
FACILITY CONTRACTING CONCEPT
GOCO

CONTRACTOR -

- BEARS MAINTENANCE COST FOR PORTION OF FACILITY BEING USED
- USES FACILITY FOR COMMERCIAL AND GOVERNMENT WORK
- IS GIVEN INDEMNIFICATION FOR GOVERNMENT WORK
- SHARES COST NORMALLY BORNE IN TOTAL BY GOVERNMENT

FACILITY IS IN PRODUCTION STATE OF READINESS VERSUS "CARETAKER" STATUS

(24 APR 91)

We continue to pursue alternatives to improve the responsiveness of the inactive base. This chart outlines one such technique that we have under study at the moment, and that is the use of a concept that we call facility contracting.

Under this concept, we hope that the plants will maintain a higher production readiness status, rather than just being in what we call a caretaker status. Under this concept, the contractor bears the maintenance cost for that portion of the facility that he would use. He is allowed to use that facility for both commercial and government work, and he will be indemnified for any work dealing with the government, as he is today.

Now, he will share that facility cost that normally is borne totally by the government, so he would have to pay for a portion of that. In our view, both the contractor and the government will benefit from this facility contracting.

Sir, in closing, the 1992-1993 budget request supports our near-term readiness by procuring ammunition for training and modernizing selected war reserve stocks and maintaining critical portions of our ammunition production base. As the defense budget and especially the ammunition appropriation declines, our defense industrial base will continue to shrink.

Our supporting ammunition producers face very tough and near-term challenges. Therefore, it will be more important than ever that the government and industry jointly strive to maintain production capability for our higher priority munitions. Our challenge, then, is to down-size the base without compromising fundamental capabilities within the constrained resources.

Mr. Chairman, I would like to thank you and the members of your committee for the time and support you have given to the Army ammunition program. I will be happy to take any questions.

Thank you.

[The prepared statement of General Schumacher follows:]

PREPARED STATEMENT BY BRIG. GEN. WILLIAM J. SCHUMACHER, DEPUTY CHIEF OF STAFF FOR AMMUNITION, DEPARTMENT OF THE ARMY

Mr. Chairman, distinguished members of the committee, thank you for the opportunity to testify today on the Army's ammunition fiscal years 1992-1993 procurement budget.

As I appear before you today, America has successfully waged a war in Southwest Asia, the first in over 15 years. As operational strategists assessed the changes and adjusted to meet the formidable threat, their demand for a sufficient supply of various types of munitions became a significant challenge. This challenge was countered by accelerating production at various ammunition production facilities. Operation Desert Storm validated the need for maintaining an ammunition stockpile and the production capability to supplement that stockpile. Our forces had and must continue to have available to them ammunition required to meet the threat, if the United States is to remain the democratic world power it is today.

Historically, the ammunition budget has been approximately $2.0 billion and higher; but the fiscal year 1991 conventional ammunition procurement budget, the lowest experienced in many years, dropped to $1.3 billion. However, as a result of Desert Storm, the Defense Department submitted an Army supplemental appropriation request of $425.8 million to fund Desert Storm requirements.

As the Defense budget, and especially the ammunition appropriation, declines, our defense industrial base will inevitably contract. Our supporting ammunition producers face very tough and near term challenges. Therefore, it will be more important than ever that government and industry jointly strive to maintain production capability for high priority munitions. We must develop means to identify key requirements, core production facilities with flex lines, and implement innovative management principles for consolidating, merging, and preserving the Army's production capability. Our challenge is to down size the base without compromising fundamental capabilities within constrained resources.

Current fiscal realities dictate that the Department of Army operate in a highly constrained fiscal environment for the foreseeable future. The fiscal years 1992-1993 budget request for ammunition recognizes these fiscal realities and is $1,249.8 million in fiscal year 1992 and $1,195.4 million in fiscal year 1993. This request reflects the Army's priorities and the best balance between risk and available funds. This request, however, does not stop the drawdown of war reserve stocks to support training or support preferred war reserve levels for modernized systems. Thirty to 35 percent of training requirements will be met by drawing down war reserve stocks, primarily older types of ammunition, and only 11 modern ammunition war reserve items are being procured. In addition, the fiscal years 1992-1993 budget request does not reflect the impact Desert Shield/Storm had on ammunition assets. As ammunition expenditure rates, for Southwest Asia are evaluated, decisions made in fiscal year 1991 will need to be adjusted. The impact this will have on future ammunition requirements is yet to be seen.

Comparison of the fiscal years 1992-1993 request with prior year appropriation is as follows:

	Millions
Appropriated fiscal year 1991	$1,367.5
Request fiscal year 1992	1,249.8
Request fiscal year 1993	1,195.4

AMMUNITION END ITEMS

Peacetime ammunition end item acquisition supports training requirements and provides modest increases to the war reserve stockpile for 11 modernization items. The end item request is divided into the following major elements:

[Dollars in millions]

Major element	Fiscal year 1992	Fiscal year 1993
War reserve	$629.2	$519.9
Training	355.9	434.6
Non-hardware	63.4	44.7
Total	$1,048.5	$999.2

Sixty percent of the fiscal year 1992 and 52 percent of fiscal year 1993 budget funds the war reserve accounts while 34 and 43 percent supports training. The remainder relates to the non-hardware aspects of the budget.

Categories of End Items in our Request

[Dollars in millions]

Category	Fiscal year 1992	Fiscal year 1993
Small/medium caliber	$136.6	$132.4
Mortars	36.4	27.4
Tank	457.3	368.2
Artillery	298.7	320.2
Artillery fuzes	0.0	0.0
Mines	8.2	3.0
Rockets	2.1	44.0
Other	26.5	37.4
Special	7.3	8.6
Miscellaneous	75.4	58.0
Total	$1,048.5	$999.2

Now I would like to address each category separately.

SMALL/MEDIUM CALIBER

The fiscal years 1992-1993 budget request includes $136.6 and $132.4 million for small and medium caliber munitions. Of these amounts $64.6 million in fiscal year 1992 and $44.7 million in fiscal year 1993 is for 5.56mm ammunition for use in the M16 series rifles and M249 squad automatic weapon. Another $73.3 million in fiscal years 1992-1993 is for 25mm ammunition used in the M242 automatic gun mounted on the M2/M3 Bradley Fighting Vehicle System.

MORTARS

The budget request funds the 120mm high explosive round, used in our new 120mm mortar system.

TANK

The request includes funding for 105mm and 120mm tank training ammunition for annual tank gunnery training on the M1, and M1A1 and M60 series tanks and provides continued procurement of the M900A1 armor piercing fin stabilizing discarding Sabot-tracer cartridge, which provides improved lethality for the 105mm tank fleet. The remainder of the request is for enhanced ammunition to support the fielding of M1A1 Abrams tanks.

ARTILLERY

The fiscal years 1992-1993 request supports the modernization of war reserve stocks of 105mm and 155mm artillery ammunition. Funding requested for the M864, 155mm baseburner projectile accounts for $120.9 million in fiscal year 1992 and $112.1 million in fiscal year 1993. This dollar amount supports war reserve objectives and provides field artillery units the extended range necessary to engage and neutralize deep targets in the 12-24 kilometer area thus enhancing their survivability. The remainder of the request includes funding in fiscal year 1993 for the search and destroy armor (SADARM) projectile; 155mm propelling charges to ensure the proper balance to the inventories of 155mm projectiles procured in support of war reserve and training requirements; and 105mm high explosive rocket assisted projectile to support fielding of the M119 howitzer.

FUZES

There is no request for dollars for fuze procurement due to a balance of fuzes to projectile requirements.

MINES

The request includes funding for practice mines to support training with the volcano dispensing system. The volcano mine system is a helicopter or ground dispensed mine system which contains anti-personnel and anti-tank mines.

ROCKETS

The request includes fiscal year 1993 funding to support training requirements for the Hydra 70 family of rockets. The Hydra 70 provides both attack and self-defense capabilities for Apache and Cobra helicopters against personnel and materiel. The request also includes funding for the 35mm practice training rocket for the law. Procurement supports annual peacetime training requirements. Training with this subcaliber rocket is more cost effective than training with the higher cost war reserve rounds.

OTHER, SPECIAL AND MISCELLANEOUS

These three categories make up the remaining items in the budget request. These include: nuclear weapons support and components for fielded nuclear ammunition currently out of production; nitroguanidine, a compound used to manufacture propellant for artillery and tank ammunition; unique equipment to support ammunition testing/depot operations; first destination transportation funding to support distribution of Army ammunition end items from manufacturing plants or assembly points to a CONUS depot, customer or port for transportation to a second destination.

AMMUNITION PRODUCTION BASE

The future ammunition base will be smaller. Fewer government-owned plants will remain active. Additional facilities will be laid away within the next 3 years. With the cessation of the Middle East conflict, the requirement to continue with inactivation will proceed as originally scheduled. These actions are essential if we are to produce future requirements in the most efficient, cost effective way.

Let us now summarize the ammunition production base request:

[Dollars in millions]

Production base	Fiscal year 1992	Fiscal year 1993
Provision of industrial facilities	$74.9	$69.3
Proving ground modernization	1.5	1.5
Layaway of industrial facilities	29.0	31.7
Prove-out of production facilities	1.8	2.3
Maintenance of inactive industrial facilities	70.1	72.4
Conventional ammo demilitarization	24.0	19.0
Total	$201.3	$196.2

The provision of industrial facilities request includes $74.9 million in fiscal year 1992 and $69.3 million in fiscal year 1993. Fiscal year 1992 funds provide for an initial production facility for the sensor fuzed weapons and the correction of environmental deficiencies. Also included is funding for equipment replacement at active plants. In fiscal year 1993 the majority of $69.3 million requested are concentrated in correcting safety and environmental deficiencies and equipment replacement at various Army ammunition plants.

In fiscal years 1992-1993, $1.5 million in each year is requested for proving ground modernization. This effort will replace obsolete, unreliable, or uneconomically repairable test equipment and instrumentation used to conduct production acceptance testing of ammunition components at Jefferson Proving Ground.

The $29.0 million requested for layaway of industrial facilities in fiscal year 1992 and $31.7 million in fiscal year 1993 is for the protection and preservation of equipment and facilities no longer required for active production, but which must be retained for future peacetime or mobilization production needs. Included are funds to layaway ammunition lines at various facilities where production is projected to end.

The prove-out of production facilities request provides for proveout and acceptance of prior year modernization, expansion and initial production facilities. These funds are used to assure that the facility is capable of producing an acceptable end product, manufacturers warranties are met, and the facility is capable of producing at the designed rate.

A major element in the program is the $70.1 (fiscal year 1992) and $72.4 (fiscal year 1993) million request for maintenance of inactive ammunition industrial base. The funds provide for the maintenance of laid away portions of active plants, inactive plants, and inactive lines at contractor plants. It supports maintenance, protection, and essential repair of government-owned plant equipment packages at these facilities. These plant equipment packages are maintained in anticipation of future production and mobilization requirements for ammunition.

A new addition to this program is the request for the conventional ammunition demilitarization program previously funded in the Army's operation and maintenance account. These dollars support the disposal/demilitarization of hazardous, unsafe munitions, emergency demilitarization actions, and elimination of obsolete/uneconomically repairable ammunition stored in the Army wholesale storage locations. Demilitarization was transferred from Army, OMA to Army, PAA in fiscal year 1992 to gain effective management control of this growing stockpile, and provide stability to the program funding.

To close, the fiscal years 1992-1993 budget request submitted before you today embodies what we feel adequately represents the ammunition program, focusing on maintaining a trained, ready Army. Although the budget is significantly smaller than in prior years, we have prioritized these dollars in order to maintain readiness, protect minimum essential sustainability requirements and support modernization of the force.

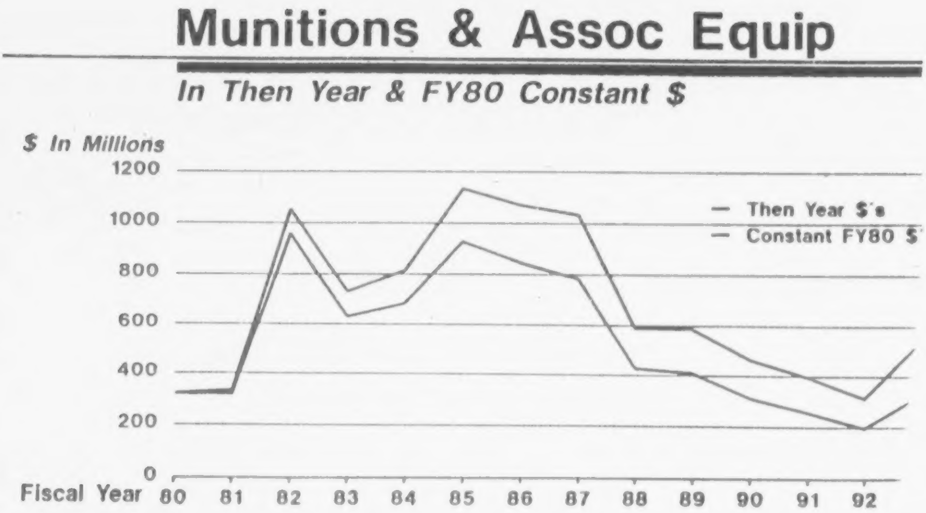
The Army, as the Nation's single manager for ammunition, has addressed the problems of ammunition procurement and industrial base considerations at a time when the overall financial resources available to the Army are being reduced. The strength of the ammunition industrial base in the United States is a most serious issue in order to meet our top priority, to provide that fighting soldier the most technologically advanced, reliable, and capable ammunition we can produce. Accordingly, we will continue to evaluate each decision we make carefully to obtain the best balance between the risk and current funding constraints. Your continued strong support in the months and years ahead is needed to ensure our soldiers are given the tools they need when and if they are called again to fight.

Senator DIXON. Thank you, General Schumacher. General Hopp.

STATEMENT OF MAJ. GEN. JAMES W. HOPP, USAF, DIRECTOR OF SUPPLY, DEPUTY CHIEF OF STAFF FOR LOGISTICS, U.S. AIR FORCE

General HOPP. Thank you, Mr. Chairman. Mr. Chairman, if I might, I would like to stand and make a presentation, if you can hear me. I will have a few charts for the closed session, as well as the charts that I wish to use now.

Senator DIXON. Thank you.



General Hopp. Sir, I would first call your attention to a chart that we have used in the past before I go into the 1992–1993 budget details. For the time period from fiscal year 1980 out to 1993, you will note our request in 1992 is about equal, in terms of dollars, when compared to the $320 million in fiscal year 1980. In terms of buying power the effects of inflation for that same period are shown by the lower line at about $196 million in 1992 when expressed in fiscal year 1980 constant year dollars.

The other point I would make with this chart, Mr. Chairman, is the relatively roller coaster appearance that you see as we build up to achieve an inventory level, as we did in 1982, with 30-millimeter and other munitions that were in production at the time. Funding then dropped to support low rate initial production for new munitions, then again began to build up with increased Combined Effects Munition and Gator Procurement. Funding then dropped down over time to where we hit the point in 1992 and begins to build again in 1993 to achieve higher levels of readiness.

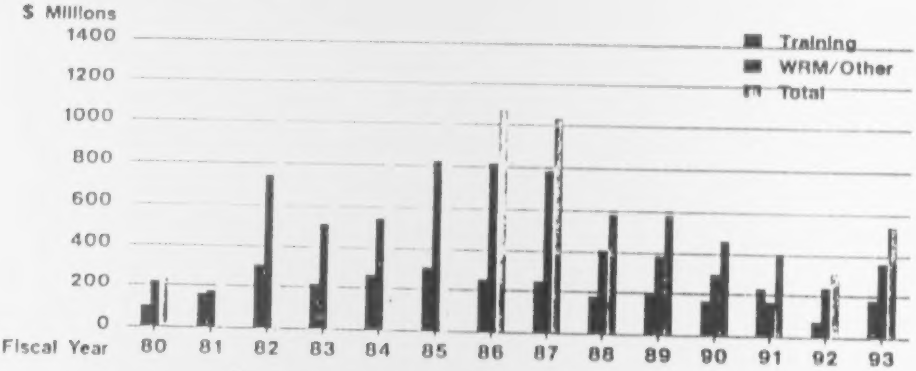
Senator Dixon. If I might interrupt at that point in time, that shows that our ammo buy in real dollars in this year will be lower than it was in the last years of President Carter.

General Hopp. Sir, in terms of constant fiscal year 1980 dollars, that is true.

Senator Dixon. Thank you. Please continue.

Munitions & Associated Eq

Then Year



General HOPP. In this chart, we have taken the same period of time—fiscal year 1980 through 1993—and have displayed it to show the breakout between training, which is the first bar; our war reserve buy, which is the second bar; and then the total program which is the third bar. In 1992 the $76 million request for training is the lowest level we have been at during this period.

We recognize that this is a lower number than we have had in the past. There is some risk associated with it, but given the fiscal realities, the Department felt we could lower training this year. If we have cut it too deep we will have to ask for reprogramming approval because we are not falling off of our emphasis on the training that we saw so effectively demonstrated in Desert Storm.

In 1993, we begin to build-back training as we take it back to 33 percent of our request, which is its historical average.

Munitions & Associated Equipment

FY 92 New Starts

	QTY	$ M
RR-180 Chaff Cartridge	251K	$2.5
BSU-85 Inflatable Retarder	14655	$14.1
Skeet/Sensor Fuzed Wpn	98	$108.7

On this chart, I have shown the three fiscal year 1992 new starts: the first item is the RR 180 Chaff cartridge which will replace the older RR 170. It provides a much larger cloud, is more dense, and gives more protection to the aircraft that uses it.

The second item is the BSU-85 Inflatable Retarder used on the M-117 bomb carried by the B-52. It is a more reliable type of retarder device for low-altitude, high-speed attack. The other new start is the Skeet, Sensor-Fused Weapon, which will begin initial low-rate production in fiscal year 1992 and build to a higher rate in the following years. The SFW, or Sensor-Fused Weapon, is a direct attack weapon used for armored targets.

Munitions & Associated Equipment

Program Summary By Category

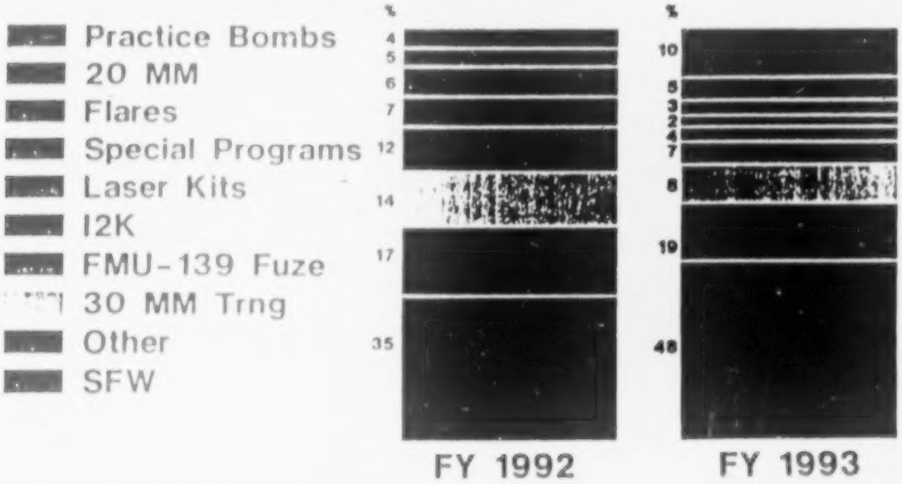
($ M)

Category	*FY91*	*FY92*	*FY93*
Rckts & Lnchers	26.5	4.6	17.1
Cartridges	108.5	49.8	83.0
Bombs	156.2	167.1	355.2
Other Items	62.8	48.1	43.4
Fuzes	33.4	36.9	35.8
Other Weapons	8.4	7.4	8.0
Total	395.8	313.9	542.5

I have taken our request and broken it out by category on this chart. I would call your attention to the line entitled "bombs", which 1992–1993, is the largest dollar value in both years of our 1992 and 1993 request, and point out that it represents 53 percent of our request in 1992 and 68 percent of our request in 1993. This is principally driven by the Sensor-Fused Weapon coming into production.

Munitions & Associated Equipment

FY 1992/93 Major Procurements



On this chart, I have taken those categories and broken them out by the type weapon being procured. I would just point out two highlights: the Sensor-Fused Weapon in 1992 is 35 percent of our request. In 1993, that grows to 48 percent of our request.

The other point I would make is that we have not requested 25 pound practice bombs and 20 millimeter ammunition in 1992. However, in 1993, we are requesting $19 million and $28 million respectively for those two items.

May I have the next chart, please?

Munitions and Associated Equipment

Industrial Production Base

- Adequate capacity today
- Declining defense budget will shrink capacity
- No incentive/profit for industry to stay committed to DOD
- Dual sources not supportable/affordable
- Single source dependence problem when unforeseen events occur
- Expanded response time drives need for higher inventories

Challenge:

- **Preserve essential production capability as DOD budget decline drives downsizing of base**

Sir, this is my last chart in the open session. You asked that we address the industrial production base. These are some of the concerns and the points we would like to make. Since General Schumacher has made many of these points during his presentation, I will not repeat them. I will, however, comment that we share the challenge that all of us, both government and industry, must meet to preserve the essential production capability of our industrial base as the DOD reduces in size and budget levels, and as industry goes through the same level of down-sizing.

Mr. Chairman, that completes my remarks. However, before I close, I, too, would like to thank you and the committee for the support that you have given the Air Force in allowing us to train our people realistically in preparation for Desert Storm, and in having sufficient quantities of war reserve munitions on hand to meet those needs.

Thank you, sir.

[The prepared statement of General Hopp follows:]

PREPARED STATEMENT BY MAJ. GEN. JAMES W. HOPP, DIRECTOR OF SUPPLY, DEPUTY CHIEF OF STAFF FOR LOGISTICS, HEADQUARTERS U.S. AIR FORCE

AMMUNITION PROCUREMENT, OTHER PROCUREMENT, AIR FORCE

Mr. Chairman and members of the committee: This is my first appearance before the subcommittee, and I welcome the opportunity to appear today to discuss the Air Force's Munitions and Associated Equipment Budget Program. The program is one of four budget activities within the Other Procurement, Air Force Appropriation (OPAF).

The request I am here to discuss today is a reflection of the reduction in the armed services that is to occur between fiscal year 1992 and the end of the decade. The fiscal year 1992 request represents a significant reduction from previous training requests, and a decline in War Reserve Materiel (WRM) when considering that the new Sensor Fuzed Weapon represents half of our WRM procurement. Nevertheless, recognizing the transformation that is occurring in the threats we face, the changes in force structure, and the need to meet the deficit reduction goals established last year, hard choices had to be made. Fortunately, through the strong support of Congress, these "choices" are coming following several years of good funding. This allowed us to build WRM levels and procure training munitions that enabled our aircrews to train to a high state of readiness thus leading to their success in Operation Desert Storm. However, as the Defense budget declines, we cannot lose sight of the critical need for a responsive industrial base and inventories sized to match order and shipping times.

The fiscal year 1992 munitions request of $314 million is significantly below the fiscal years 1980-1991 average funding level of $670 million. It is about equal to the fiscal year 1980 request of $320 million. Fiscal year 1993 increases to $543 million and includes an increase for both training and WRM. A comparison of the fiscal year 1991 appropriated with our fiscal years 1992-1993 requests follows:

Munitions and Associated Equipment

	Dollars in millions
Fiscal years	
1991	$395.8
1992	313.9
1993	542.5

The fiscal year 1992 request represents a shift from the readiness focus we had in fiscal year 1991 to one based more on sustainability. Our 1992 request commits only $75.6 million of our budget toward training munitions as compared to $229.7 million in the fiscal year 1991 appropriation. In fiscal year 1992, our focus is toward a greater investment in war reserve munitions. Sixty-seven percent or $210.4 million of the fiscal year 1992 request is for WRM compared to 35 percent or $140.5 million in fiscal year 1991. It must be noted, however, that the shift in WRM is driven by the introduction of the Sensor Fuzed Weapon funded at $108.7 million. Looking beyond the categories of training and WRM at the specifics of our fiscal year 1992 request, you will find almost 75 percent of the dollars relate to six items: 30mm training ($44.4 million), Improved 2000 LB Hard Target Bomb ($21.4 million), BSU-85 Inflatable Retarder ($14.1 million), Sensor Fuzed Weapon ($108.7 million), and FMU-139 Fuze ($36.9 million). The balance of our request includes spare parts procurement, modifications, special programs, M-16 rifles for our security police, F-15 and F-16 self-protection flares and several small programs, all valued at less than $2 million.

The fiscal year 1993 request illustrates a different perspective than fiscal year 1992. Several more items are requested for procurement in fiscal year 1993 than fiscal year 1992 particularly in the category of training munitions. Specifically, our training request increases to $178.7 million, about the level we were at in fiscal year 1988. WRM increases to $343.2 million. The Sensor Fuzed Weapon again predominates the WRM portion of our request with $258.5 million and thereby skews the request. Nevertheless, we view this return to a higher training munitions funding level as critical since we expect available stocks will be diminished.

Key training items in the fiscal year 1993 request are the aircraft cannon ammunition and practice bombs. I would add as an aside that although the fiscal year 1992 training munitions portion of the request is very small, it does not mean that we are underplaying the value of readiness. Although it may be months before all the lessons learned from Operation Desert Storm are analyzed, it is readily apparent that one of the key factors in our success was that our aircrews were trained and ready to execute their missions and that they were capable of putting weapons on target. Our commitment to training munitions in fiscal year 1993 is an affirmation that we must have a trained force capable of responding to a wide array of conflicts.

Something which we are evaluating, but as operations continue have not yet been able to fully assess, is the impact of reduced training expenditures which resulted from Desert Shield and Desert Storm operations. While we know that training consumption decreased during this period, we have not yet completed a full inventory review to determine the amount of change and how it might impact our training request.

Although fiscal years 1992-1993 budget quantities were established prior to Operation Desert Storm, the WRM buys reflected in the fiscal year 1992 request would remain largely the same if we were to redo the budget today given production base considerations and fiscal year 1991 Desert Storm Supplemental funding. Although the supplemental appropriation will allow us to replace consumption of our most modern munitions—about 28 percent of all expenditures—it doesn't provide for replacement of the older, but in many cases, still effective munitions expended during Desert Storm. Of special note are the older precision guided munitions (PGMs) that were expended in significant numbers.

Theater planners are taking into consideration the lessons learned from the war as they complete theater requirements. However, we must apply some cautionary notes to the lessons learned from the Desert Storm experience. We know that air-to-air missiles and self-protection chaff and flares were used sparingly because the Iraqi Air Force was either unwilling or unable to fight. We know as well that some area denial antiarmor weapons such as Gator were used to a lesser degree because the Iraqi Army's tanks were entrenched and did not become a mobile force until the waning days of the conflict. Last, we are aware of the value of low observable or stealth technology and how the employment of F-117s is a necessary part of these operations.

As you know, the Air Force uses the Non-Nuclear Consumables Annual Analysis (NCAA) process to determine wartime munitions needs. This is an annual process requiring extensive dialogue among the warfighting commands and requires examination of intelligence data, scenarios, force structure and operational plans. The good news from Desert Storm is the NCAA is a viable process and it continues to have theater CINC support. The stockpile objectives established by the NCAA provide a parameter we believe will serve us well for a number of combat scenarios. As a result of Desert Storm, some improvements are underway and we expect an updated NCAA to be completed by this summer. We recognize as well that the change in threat and force structure may result in a change in how munitions are allocated among theaters.

In the interim, we have met with the theater commands and reached agreement on a redistribution objective for those munitions afloat or in the CENTCOM Area of Responsibility (AOR). Also, we are examining how war reserve requirements should concentrate on two major regional contingencies and a capability to counter the air-breathing threat to the United States. We need to assess procurement of precision guided munitions and other preferred munitions based on their target kill capability, rather than basing procurement upon the availability of older substitute weapons. The outcome, of course, will be based on affordability as well as weapon effectiveness and conservation of aircraft and aircrews.

Now I will discuss the particulars of our fiscal years 1992-1993 budget request:

ROCKETS AND LAUNCHERS

The funding in this category is primarily for 2.75 inch rockets, specifically $12.2 million in fiscal year 1993. No rocket motor funding was included in fiscal year 1992 due to production delays resulting from the explosion at the Radford Army Ammunition Plant, Virginia. Total fiscal year 1992 funding of $4.6 million and the remaining $4.9 million of the fiscal year 1993 funding request is required to procure several items each with a procurement value of less than $2 million.

CARTRIDGES

Several types of cartridges are included in this category. Most significant are those for aircraft cannons, chaff, and stores ejection. Our fiscal year 1992 request is lower than fiscal year 1991 levels due primarily to the decrease in training munitions funding.

In fiscal year 1992, 30mm training is funded at $44.4 million, followed by $44.2 million in fiscal year 1993. These amounts will adequately sustain requirements. Funding for 20mm training ammunition is not requested in fiscal year 1992 but fiscal year 1993 requests $26 million. No 20mm procurement in fiscal year 1992 may cause us to modify training expenditures pending receipt of fiscal year 1993 deliveries. This is something we will be watching very closely.

While we have not requested any 20mm combat procurement in fiscal year 1992, we do plan to procure a small quantity of the Navy developed PGU-28 20mm combat round in fiscal year 1993. Initially the Air Force did not intend to procure the PGU-28. But, based upon lethality tests conducted in October-November 1990, we found it to be 40 percent more likely to hit and kill airborne targets than the older M-56 rounds. Consequently, it has become Tactical Air Command's round of choice. The Non-Nuclear Munitions Safety Board (NNMSB) must approve this round before it can enter the Air Force inventory. We expect this to occur in June 1991. Once that is completed, we plan to convert some of the current M-55 training round procurement to buy PGU-27 20mm which is the training round version of the PGU-28. We are working with the Army Single Manager for Conventional Ammunition (SMCA) to effect this conversion with minimal impact on the production base.

Funding is requested for $2.5 million in both fiscal year 1992 and fiscal year 1993 for a new chaff self-protection cartridge. This new item, the RR-180, provides a significant improvement over the RR-170 chaff cartridge in countering radar frequencies expected to be generated by current technology radars.

Other funding requested in this category includes $5.1 million in fiscal year 1993 for the 3000 foot pound ejector cartridge used to eject stores from the aircraft. Miscellaneous cartridges each with a procurement value of less than $2.0 million are funded in fiscal year 1992 and fiscal year 1993 at $3.0 million and $2.3 million, respectively.

BOMBS

The most significant procurement in fiscal year 1992 and fiscal year 1993 is the Sensor Fuzed Weapon (SFW). Procurement for this new antiarmor weapon begins in fiscal year 1992 with funding of $108.7 million, followed by $258.5 million in fiscal year 1993. These amounts represent 35 and 48 percent, respectively, of our total fiscal years 1992-1993 munitions request. Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) are well underway and showing good results. We are confident the program is on track for a production start in fiscal year 1992. The SFW will complement older antiarmor munitions such as Rockeye and increases lethality while reducing aircrew exposure to enemy threat systems.

A second item that begins procurement in fiscal year 1992 is the BSU-85, an air inflatable retarder for the 750 pound M117 bomb. Testing was completed in May 1990 and competitive procurement will be made by the SMCA. Requested funding of $14.1 million in fiscal year 1992 and $4.8 million in fiscal year 1993 will begin building war reserve stocks to support the retarded version of the preferred general purpose bomb used by the B-52. This retarder will enhance the B-52s ability to employ the M-117 in the high speed, low altitude arena.

Another item with sizable growth in fiscal year 1992 is the Improved 2000 pound hard target munition, also known as the I2K. This is the weapon that worked so effectively with the guided bomb units (GBUs), and which attained media attention during Operation Desert Storm. It is not only the effectiveness of this weapon which compels us to increase procurement, but also its utility for standoff applications when coupled with precision guided munitions. Congress helped us last year by adding $12.3 million to this program, and that enabled us to exercise a contract option which prevented a production break. Fiscal year 1991 supplemental funds will replace assets expended during Desert Storm. Fiscal years 1992-1993 funding of $21.4 million and $21.7 million, fiscal years 1992-1993 funding of $21.4 million and $21.7 million, respectively, will procure 3,446 bombs and continue the build up of the war reserve inventory.

Another outstanding performer in Desert Storm was the low-level laser-guided bomb (LLLGB). We all saw televised video shots of guided bombs destroying their targets, while minimizing collateral damage. This provides strong evidence of the value of the LLLGB. Supplemental funding will replace the latest generation GBU-24/27 LLLGB guidance kits expended during Operation Desert Storm, but not the older, first/second generation technology GBU-10s and GBU-12s. The impact of GBU-10/12 expenditures, and our need to replace them, will be assessed as part of the NCAA update and be a factor in future LLLGB procurement requirements.

Another key item is the BSU-49, air inflatable retarder, used with the 500 pound MK-82 general purpose bomb. Our fiscal years 1992-1993 request contains $5.5 million and $5.3 million, respectively, down sharply from $14.5 million in fiscal year 1991. At current forecasts, this funding will support about 80 percent of the training requirements. An alternative, albeit not preferred, would be to draw from WRM stocks should it be deemed necessary.

Several training items skip procurement in fiscal year 1992 and again are funded in fiscal year 1993. These include the 500 pound MK-82 Inert heavyweight trainer, the 2,000 pound MK-84 Empty heavyweight trainer, and the 25 pound BDU-33 practice bomb. Reliance on existing inventories and funded due-in's will be necessary until fiscal year 1993 deliveries begin. Here again, we are taking some risk that may require modifying training expenditures depending on our post Desert Storm analysis.

We have not requested CBU-87, Combined Effects Munition (CEM), funding based on our decision to terminate the program. However, given the success of CEM in Desert Storm, and the number expended, two actions are presently underway. First is the replacement of Desert Storm consumption with fiscal year 1991 supplemental funding. Second is the reevaluation of the CEM requirement due to extensive Desert Storm expenditure of older cluster munitions used as a substitute for the CBU-87. These Vietnam war era weapons have certain limitations on delivery parameters, and are beginning to show less reliability as they age, thus necessitating a reassessment of our overall inventory posture.

OTHER ITEMS

The funding request for these items is reduced by $14.8 million in fiscal year 1992. Several program adjustments contributed to this—the largest being the $11 million decrease for special projects.

Flare programs were also adjusted. The MJU-10 used with F-15 aircraft, requires $7.5 million in fiscal year 1992, about the same level as fiscal year 1991, but is reduced to $5.6 million in fiscal year 1993. These funds will procure about 15 percent of our current WRM requirement. Funding for the MJU-7 flare, used by the F-16, increases in fiscal year 1992 and fiscal year 1993 to accommodate the increased number of F-16s in the inventory.

Finally, the LUU-2 flare, dispensed from the fighter aircraft-borne SUU-25 flare dispenser, was not programmed in fiscal year 1992 but is budgeted at $1.3 million in fiscal year 1993. This will accommodate training requirements.

FUZES

Fuzes not procured as part of an all-up-round weapon are budgeted in this category. The only fuze we are currently procuring is the general purpose FMU-139 for which we require $36.9 million in fiscal year 1992 and $35.8 million in fiscal year 1993. The FMU-139 will enhance the effectiveness of our general purpose bomb stockpiles, as well as provide a replacement for a number of Vietnam-era fuzes whose reliability is degrading.

OTHER WEAPONS

The last budget category, Other Weapons, procures such items as handguns, machine guns, and other small arms. Our request includes four weapons:

The first is the 12-gauge shotgun used by security personnel, combat control teams, munitions maintenance and special operating units. It is used as a short range combat weapon as well as for riot control and law enforcement. The fiscal year 1992 buy of 252 will complete our inventory objective.

The second weapon is the Squad Automatic Weapon (SAW), a one-man, lightweight, portable machine gun used by security police Contingency Security Elements (CSE) and Air Base Ground Defense (ABGD) flights. Its flexibility of employment makes it an ideal weapon for a variety of security police missions such as perimeter defense, patrolling, and security of priority resources. Our $2.1 million request in fiscal year 1993 will procure 1,004 SAWs, leaving a balance of 1,948 to be procured.

Fiscal years 1992-1993 M-16A2 rifle procurement continues replacement of the older, difficult-to-maintain M-16s bought during the 1960s. The M-16A2 provides greater range, accuracy, and lethality, as well as compatibility with the NATO standard 5.56 round.

Finally, the $300,000 requested in fiscal year 1992 for the 9mm compact pistol will procure a standardized personal defense weapon for Air Force Office of Special Investigation (OSI) personnel. They require a compact, concealable weapon for their operations.

Mr. Chairman, this concludes my prepared statement. I thank this committee for the opportunity to address the issues associated with the fiscal years 1992-1993 OPAF munitions budget request. I would now be pleased to respond to any questions you may have.

Senator **Dixon**. Thank you, General Hopp.

As I understand it, General Schumacher and General Hopp, you do not mind waiting for the classified session after we hear from the next panel?

General **Schumacher**. No, sir.

General **Hopp**. No, sir.

Senator DIXON. Then I am going ask you some questions now, and then we will go to the next panel. We will come back to the classified session.

I think both of you probably saw the recent 1991 joint military net assessment by the service Chiefs of Staff. To quote from it: "The loss of sub-tier suppliers, manufacturers of sub-systems of larger systems, is a threat to our ability to field state-of-the-art weapons systems on a timely basis."

Do you believe this is going to affect the ammunition production base? I ask both of you that question.

General SCHUMACHER. Sir, I would agree with those words, and I think that it has been going on for several years. It is a complex problem. I believe, however, that we need to remain vigilant trying to assess where that really impacts production. But certainly with sub-contracts, it can be hidden both from the government and, depending on how far down it is, from the prime, so he needs to remain vigilant when he has a component that he is buying offshore or has, maybe, just one source.

So I agree with that assessment, and I am not sure I have a good solution, other than to remain vigilant and look at creative ways to keep on top of that problem, sir.

Senator DIXON. Thank you. General Hopp.

General HOPP. Sir, I would agree that it is a major problem. It is not unique, as you are aware, to the munitions industry, however. We see it in others as well.

It is my view that what we need to do is ensure when we award munitions contracts that we do it in such quantities that it enables the producer or the prime contractor to have sufficient lead time to establish his sub-tier manufacturers so they, too, can achieve economic production runs.

Senator DIXON. General Schumacher, as chairman of this subcommittee I hear a lot of complaints from the private ammunition manufacturers that competition or comparisons between the Army ammunition plants and private sector companies are not fair, because Army plants do not include all of their costs of operating in the price they bid for a specific munition or component. What would be your response to that kind of charge?

General SCHUMACHER. Sir, my response would be that I have been hearing those complaints for at least a decade, and it deals with the arsenal statute. If one reads the statute and then goes back and looks at the Comptroller General rulings, I believe that there has been enough testing of that legislation to say that it is an appropriate way to compete GOCO plants against commercial plants.

Basically, what you are doing is looking at the added cost for a government-owned contractor operated facility. What added cost must that facility charge to the Army, or to another service, compared to what a civilian commercial operation might do. So I certainly understand the commercial industry saying they do not think it is appropriate, but from where I look, I do not see any problem with the arsenal statute.

Senator DIXON. I hope you both know that this subcommittee has made a very strong statement in the past to support adequate training ammunition for the military. We have added some, as you know, in a number of years. I wonder if I could look at that chart again, General Hopp, that you had there—it had a lot of pretty colors—that first one.

General Hopp. The one with the lines on it, sir?

Senator Dixon. Maybe it was the second one that shows the training numbers, and so forth. I think it might be Chart 2 that you had. It has the verticals in it.

General Hopp. Is that the one, Senator?

Senator Dixon. Yes. Now, there you see something that I will tell you bothers me a lot. I have supported this entire build-up over the years and defended it back home in my State, sometimes when it was not so popular to defend. I think it is remarkable to look at these charts, gentlemen—I do not know who is making these decisions, but look at that ammo. Here is training ammo in 1980. You know, in the 1990s here, 1992 is going to be lower than 1980.

General Hopp. That is correct, sir.

Senator Dixon. I am delighted we had a short war and I hope all of them are going to be short, General.

General Hopp. Sir, if I may, we are, as I mentioned in my briefing, concerned about the level that we have taken training to, the $76 million in 1992. However, I believe that this amount represents a prudent risk, given fiscal realities.

Also we experienced some level of training reduction due to the war, and as a result we are going to have a small cushion of munitions available to use during this period. We have programmed in our 1993 request a build-back to a higher training level so that even after we have used up that small cushion we can still support essential training.

Finally, sir, we are going to be watching training requirements very closely, because there is no relaxation of the Air Force's commitment to realistic live fire training such as in Red Flag, so that our crews will be adequately trained, as was demonstrated in Desert Storm. If we find that we have cut it too far, we will come in with a reprogramming request, because we simply cannot allow that to happen in terms of training our air crews.

Senator Dixon. I would just comment as a Senator who, I guess, can exercise that privilege, that I have supported the B-1 and the B-2, and I will support all of the essential stuff that we need at considerable expense. But I think that these items that do not have much of a constituency out there have been ignored a lot in recent years. They do not make page 1. They are not very exciting. But it does occur to me that we do not try very hard to maintain this base. If you gentlemen—you certainly are the responsible people who make those judgments—feel comfortable with it, I guess I feel better about it, but I do think the numbers look awfully bad, and have for years.

General Hopp. Sir, historically, the Air Force has put about one-third of its munitions budget into training munitions. We are lower in 1992, but we intend to go back to that level in 1993. That level has allowed us, as demonstrated in Desert Storm, to train our people adequately.

Senator Dixon. General Schumacher, do you want to add anything there?

General SCHUMACHER. Sir, one of the items my charts do not portray is the total amount of ammunition that we use for training. My charts show what we are buying.

If you add up what we are drawing down from the inventory and the new procurement, we are averaging about $1 billion a year in training. I have looked in previous years and, if anything, it has gone up slightly.

So even with the threat change and the force reductions that the military will be making, I see the Army spending roughly—or consuming $1 billion a year in training, so a portion of that will come from new procurement and a portion of it will come from the inventory that we already have.

Now, there are those, then, that worry, am I drawing down the inventory of items, so that I now have a sustainability problem? Again, I have looked at those items that we are drawing out of the inventory. They are typically the older items.

So we are basically removing things from the inventory and replacing them with a newer item. In other cases, there are items that we draw down and then buy every 3 to 4 years. But I am not concerned—at the moment, about drawing that inventory down based on the items that I have observed.

But I guess the bottom line is, $1 billion a year is what the Army is spending on training, has been, and will continue in the near term.

Senator DIXON. So your point is that we are drawing out of the inventory supplies, some of the necessary material that we use?

General SCHUMACHER. Yes, sir. That chart that I showed really did not show the true picture for the Army in terms of what we are using for training.

Senator DIXON. I hear all that, and I respect you gentlemen. I just hope as the industrial base shrinks and shrinks, both in the private sector and at the arsenals like Rock Island, which is in my State, and other places—my friend the distinguished ranking member is not here, but the Mississippi dispute was fought out last year and he lost; I guess he figures there is no sense in pounding the table about it now.

But the point is that there is this tremendous shrinkage, and there are these stats that you see, and I hope that we are cognizant of the fact that we are going back to the way it was before I came to the U.S. Senate. I guess maybe that is the way it goes.

General Hopp, I understand that the Air Force has now decided to begin buying the Navy-developed PGU-28 20-millimeter combat round. Would you comment on that for me, sir, why you have decided to begin buying that round?

General HOPP. Sir, the PGU-28 20-millimeter round will provide us about 40 percent better kill probability. It provides a greater distance and more velocity in an air-to-air role, which is what we are primarily concerned with when we look at the use of our 20-millimeter gun on our fighter aircraft.

We believe with that increased lethality we should start to buy the PGU-28 and we are in discussions with the Army to begin buying those rounds. But we are also concerned about the production impacting on the existing base, so we are working with the

Army to try and minimize the impact as we transition to the PGU-28 and its companion training round, the PGU-27.

Senator DIXON. General, you are asking for 1991 funds, 1993 funds. No request for 1992 funds. If you are beginning a program to buy this 20-millimeter round, why do you not have any money in 1992 for this round? Can you explain that?

General HOPP. Sir, when we looked at all of our requirements and the amount of money that we had this year, it was determined that there would be sufficient training rounds to allow us to meet our 20-millimeter training needs with what we have funded in fiscal year 1991 and prior.

That funding will support us through 1992 and allow us to begin PGU-27/28 production using a limited quantity for testing and the balance for training. That is the reason why when we looked at all the factors we decided not to request any money for 20mm in 1992.

Senator DIXON. General Schumacher, what is the Army's procurement plan for this 20-millimeter round?

General SCHUMACHER. Sir, that has not been finalized yet. As General Hopp indicated, the Air Force and the Army have been looking at that, and it is a good example of what we have been talking about so far today. The Army Procurement Command at Rock Island is looking at that in terms of where we are to place that work to best suit our industrial base. I talked to them yesterday in regard to that, and asked when they thought they would have that analysis completed, and they anticipate that in 3 to 4 weeks they will be ready for a decision.

Senator DIXON. You will communicate that to us, I trust?

General SCHUMACHER. Yes, sir. I will be happy to do so.

Senator DIXON. I thank you both. I think we will hear from the second panel, and then we will come back for the classified meeting. Thank you very much.

General HOPP. Thank you, Mr. Chairman.

General SCHUMACHER. Thank you.

Senator DIXON. Would the second panel, consisting of Mr. Allen, Mr. Appleman, and Mr. Catani, come up to the witness table, please? [Pause.]

Gentlemen, thank you.

Ladies and gentlemen, our second panel this afternoon includes three distinguished witnesses from private sector ammunition production companies. Mr. Angelo Catani is the president of Olin Ordnance. Mr. Richard Allen is the president of Talley Defense Systems. Mr. Howard Appleman is the president of Armtec Defense Products.

Senator Lott, the distinguished ranking member and I, invited these experts to give the subcommittee their views on the current overall health of the conventional ammunition production base in the United States and the impact of the fiscal year 1992-1993 budget on our ammunition production capability in the future.

Gentlemen, we welcome you to the subcommittee today. We appreciate your being here, and of course your full statements will be included in the record. We will have questions after you have given your oral remarks. We will start in the order that you are sitting, Mr. Catani, would you proceed first, please?

STATEMENT OF ANGELO CATANI, PRESIDENT, OLIN ORDNANCE

Mr. CATANI. Thank you, Mr. Chairman. Mr. Chairman and members of the subcommittee, I thank you for the opportunity to comment on the industrial ammunition base and the 1992-1993 budget. I make these comments as a member of the industrial base not in any way in conflict with our military customers, because I fully agree with them that we must be working together on the resolution of this problem.

I appeared before you in March 1988 to comment on the 1989 budget and the industrial base. At that time, I painted a rather gloomy picture. I quoted high-ranking officials, committees, presidential committees, and blue-ribbon panels. I spent interminable hours gathering the data. All warned of the erosion of the base.

In the 3 years that have passed, there have been more studies—CSIS, ADPA, AUSA, industry—more high-ranking officials. The erosion is still taking place. I think we are now at the dangerous stage. A further decline will leave no base, and then we do not have to be concerned about responsiveness.

The Gulf war I think was a warning. We had 6 months to prepare. Some ammo was surged. We know that for a fact. We were involved in that surge. Other ammo was supposed to have been in shortage. Our military customers can best address that. But the war was short. We were fortunate. We had prior stockpiles, superior ammunition, superior forces, superior tactics.

If the Gulf war was of longer duration, the erosion of the base to today's standards would prevent the base from ramping up to surge requirements, I am fully convinced of that. A protracted engagement would have left our forces lacking in certain types of ammunition—the conventional ammunition.

I would like to now comment on the defense budget aspects. The total defense budget is declining in real terms and small percentages. The ammunition budget, in contrast, since 1985 has gone from approximately $5 billion total ammunition, all forces, to now, where it is less than $2.5 billion. This is no longer a small percentage reduction. It is 50 percent or more.

Many well-known names in the industrial base are gone. Others are marginal. Others have been sold. Some have been spun off. Many are contemplating getting out of the business. I do not have to tell anyone the condition of defense stocks in this country. I would like to state that once these defense companies go down, it is almost impossible to get them back up again.

I believe that a plan must be formulated quickly. It must be unified, it must be supported by our forces, it must be supported by the Congress, it must be worked with industry, and it must be implemented. If not, the ammo base cannot respond to military requirements and to our national security.

I am personally willing to help in any way possible to volunteer—to volunteer the resources of the Olin Corporation to assist and work with anyone willing to get together to work this plan.

You have also asked me to comment on the 1992-1993 budget. I will comment on that as it relates to Olin's operations only.

There is presently no 20-millimeter PIVADS ammunition in the 1992. There is no 30-millimeter Apache ammunition in the 1992.

There was a serious reduction in 20-millimeter Phalanx ammunition.

The Navy PGU series that has been addressed by General Schumacher and General Hopp is presently under discussion, and we are involved in those discussions with our Rock Island customer. Hopefully, that will be concluded within the next few weeks.

But should all of the reductions take place as are presently contemplated, I have only one decision that I can make, and that is I must shut down my medium-caliber ammunition operations. I have no choice. I would rather do that than slowly bleed to death over the next few years trying to figure out how to keep it maintained.

Mr. Chairman, members of the subcommittee, I want to thank you for the opportunity to address you today and give you our views and opinions.

Senator DIXON. I thank you, sir. Mr. Allen.

STATEMENT OF RICHARD H. ALLEN, PRESIDENT, TALLEY DEFENSE SYSTEMS, INC.

Mr. ALLEN. Mr. Chairman, I appreciate the opportunity to appear before you today and offer my perspective and comments on the health of the conventional ammunition base of the United States. As I have already provided a prepared statement, I will try to keep this relatively brief.

My comments today will cover three things: first, the conventional ammunition base must change with the changing mission and configuration of the armed services. Second, the Armed Forces must go about its business of procuring ammunition differently than it has done in the past, and third, with the decreasing budget, it is my belief that by reducing the unneeded reams of paperwork and resultant supporting manpower we can maintain the required product and service without any sacrifice of quality and quantity.

I would like to provide some background information before I give you my specific recommendations. Presently, the ammo base is positioned to supply the military with its annual requirements of the products that have historically been required to be ready to go to war, but with a second capability to respond to an emergency situation in time of conflict.

The mission of our military is changing from one of preparing to fight long and resource-depleting campaigns to one of being able to respond quickly to emergency situations throughout the world with a flexible fighting force that operates from the equipment and stores on hand.

The rate of technological change and defense is so rapid that technology has become a greater part of the tactics, strategies, and overall capabilities than ever before. Maintaining defense technology is a national need. Tools must be made available during the time of declining defense budgets to place defense contracts where they will do the most national good.

Now, contrary to, I guess, the response of General Schumacher, I am going to comment on the other side from an industrial standpoint relative to the Arsenal Act. The use of the Arsenal Act, in my opinion, is a primary example of how a seemingly innocent and straightforward piece of legislation can expand and assume an entirely different function throughout the administrative rules, policies, and procedures that spring up around it and eventually overshadow its original intent.

The law was originally enacted in the mid-1800s and is so short that I can read the current version to you in about 10 seconds: "(a) The Secretary of the Army shall have the supplies needed for the Department of the Army made in factories or arsenals owned by the United States so far as those factories or arsenals can make those supplies on an economical basis; and

"(b) The Secretary may abolish any United States arsenal that he considers unnecessary."

I believe the purpose of the act was to allow the Secretary of the Army to maintain a production base when there was no commercial or private industry available. Now, it is used as rationale for directing work to the often aged and inefficient and more costly arsenals and away from the private sector by permitting an unfair proposal evaluation that recognizes only the out-of-pocket or variable costs of the arsenal, regardless of what the final cost for that item may be.

I give you a quote from a letter received at Talley that says, "Should any GOCO bid, the cost evaluation procedures will be in accordance with the 'arsenal statute' using only out-of-pocket costs."

I have no doubt that this statement is entirely consistent with the procurement policies that have the Arsenal Act as their starting point, but how we got from the act that I previously read to you to this justification of paying more for a product manufactured in an arsenal when less costly private sector alternatives are available is still beyond my comprehension.

I guess with these comments as a foundation, I will now go into some specific recommendations as to an approach to preparing the conventional ammunition base for its new mission and obtaining the most effective use of current and future ammunition budgets.

First, the government must build long-term relationships with carefully selected, high-quality suppliers that have the capability to both advance technology and efficiently manufacture products. This means that we must recognize, as commercial industry has recognized long, long ago, that the best buy for the military is not necessarily the lowest bid on an immediate contract at hand.

Moreover, the ability of a company to contribute to technology advancement through research and engineering must be acknowledged in current military decision-making. Technology—yes, it has its price, and the propensity of the military to use technically competent companies for development and then jump on the first seemingly low-priced band wagon at the earliest stage of production has cost U.S. taxpayers vast sums of money.

If we eliminate our technology base, we may cost them their future security. O&M funds must be recognized as procurement costs. We must increase the use of option contracts in developing programs to provide initial production activities to those companies that have technical and production capabilities.

Seeking competition from nondevelopers will always find lower bids because technical staffs, as I stated previously, do cost money, even though it is this technical staff and ability that has helped us to win wars in time of need. We must increase the use of multiple year contracts in order to stabilize the military supplier relationship and to maintain lower cost.

Second, the military must find some way to make and implement good, value-based decisions. Complexities and inconsistencies in defense contracting have created a challenging regulatory and performance environment where firms that have been doing defense business for decades are withdrawing. I believe that the acquisition system is so constrained by rules, procedures, policies, and legalities that it is very difficult for a good decision to survive the existing process.

When a good decision flies in the face of a literal interpretation of CICA, the good decision should win. Make the exceptions to CICA supported with good decisions and usable by procurement officials. Lord only knows we have enough auditors out there to support these decisions.

Finally, attempts by the military to implement total quality management which have proven so successful in American industry and revitalizing of worldwide competitiveness should be encouraged. Recognize and encourage excellence, and make long-term commitments to the future with partnerships founded in excellence.

TQM should speak for itself, and if you do not already have it and/or implement it in the near future, you will be noncompetitive and will have nobody to blame but yourself, but by demanding its implementation by contract and reporting of same, we have again increased, by contract, the paperwork and resultant costs along with the establishment of additional nonessential monitoring and audit requirements by the government. I believe we need to reduce the paperwork and provide the product.

I want to thank you for the opportunity to offer these remarks today, as I believe the ammunition production base is at a major transition point, and our success in providing the needed support is one of the major challenges we in industry face today.

[The prepared statement of Mr. Allen follows:]

Prepared Statement by Richard H. Allen, President, Talley Defense Systems

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to appear before you today and offer comments regarding my perspective on the critical subject of the overall health of the conventional ammunition production base of the United States.

I am the President and General Manager of Talley Defense Systems, a company with over 30 years experience as a supplier of products to the United States Armed Forces. Traditionally, TDS has been a supplier of aircraft life-saving devices and missile components; however, the ammunition business has become very important to Talley Defense over the past 9 years as our direct ammunition contracts to the U.S. Army have grown significantly. Our company's experience also includes commercial applications such as the automotive air-bag. This makes us somewhat unique among the historical, mainstream ammunition manufacturers for the U.S. Army. Therefore, my comments are offered from a conventional ammunition supplier, with the added perspective of successful development of products in other markets. In both cases, military and commercial, we have created our success with a strong technical capability.

My comments today have two primary themes. First, the conventional ammunition production base must change significantly in conjunction with the changing mission and configuration of the U.S. Armed Forces. Second, the Armed Forces, and especially the U.S. Army as the single manager for ammunition procurement, must go about its business of procuring ammunition differently than it has in the past.

During the early 1940's, America found itself facing a tremendous challenge converting commercial industry to produce weapons in the technology of that day. After World War II the concept emerged of keeping some group of companies for rapid mobilization in the event of further emergencies. Some of these companies were privately owned and some were Government owned GOCO's.

Presently, the ammo base is positioned to supply the military with its annual requirements of the products that have historically been required to be ready to go to war. That translates into the ability to satisfy an immediate need determined largely by the size of the annual ammo budget, which has been decreasing at an alarming rate over the past fiscal years, and a second capability to respond to an emergency situation with a surge of production that would support U.S. troops in a demanding, protracted conflict. The startling and revolutionary world events that have occurred over the past 2 years have redefined the mission of the U.S. military and, therefore, will redefine the mission of the ammunition base that supports it. Over the years, technology of battle has changed and maintenance of this "BASE" has become a costly quest, rather than a prudent wartime measure.

U.S. Armed Forces are downsizing—even though it is my personal feeling that we should place more emphasis on the downsizing of the civilian forces versus the military forces, which is needed to reduce the bureaucratic empires that demand and produce paper minimizing the available dollar for products. Some examples of this are as follows:

The use of the Arsenal Act (10 U.S.C. 4532) is a primary example of how a seemingly innocent and straightforward piece of legislation can expand and assume an entirely different function through the administrative rules, policies, and procedures that spring up around it and eventually overshadow its original intent. The law was originally enacted in the mid-1800s and is so short that I can read the current version to you in about 10 seconds:

"(A) Secretary of the Army shall have supplies need for the Department of the Army made in factories or arsenals owned by the United States, so far as those factories or arsenals can make those supplies on an economical basis.

(B) The Secretary may abolish any United States arsenal that he considers unnecessary."

The purpose of the Act was to allow the Secretary of the Army to maintain a production base when there was no commercial or private industry available. Now, it is used as rationale for directing work to the aged, inefficient, and more costly arsenals and away from the private sector by permitting an unfair proposal evaluation that recognizes only the out-of-pocket, or variable, costs of the arsenal regardless of the final price that the Army will pay for the material. Here is a quote from a letter we received at Talley from an Army procurement official:

"Should any GOCO bid, the cost evaluation procedures will be in accordance with the "Arsenal Statute" using out-of-pocket costs".

I have no doubt that this statement is entirely consistent with the procurement policies that have the Arsenal Act as their starting point, but how we got from the Act that I previously read to you to this justification of paying more for a product manufactured in an Arsenal when less costly private sector alternatives are available, is beyond my comprehension. This is particularly bad, now that such procedures tend to erode the national technical base.

The original Public Law 87-653 "The Truth in Negotiations Act" was only one paragraph long, yet there are reams and reams of paperwork which have been written to interpret same, most of which is make work and added costs for industry and the Government with little or no cost benefit.

Value Engineering Change Proposals are covered by the FAR, yet, once again, the various services have their own qualifying policies and procedures. In fact, within a service, different commands have different procedures.

The mission of our military is changing from one of preparing to fight a long and resource-depleting campaign to one of being able to respond quickly to emergency situations throughout the world with a flexible fighting force that operates from equipment and stores on hand. The ability of that equipment on hand to offer the decisive advantage against our opponents will be a primary determinant in the outcome of any future conflict. There is little doubt that success in Desert Storm was determined by the technological advantages of the weapons on hand and the superior character of the U.S. troops that used them. These very basic changes have a deep effect on the ammo base and to the companies that comprise it.

The rate of technological change in defense is so rapid that technology has become a greater part of tactics, strategies, and overall capability than ever before. Maintaining defense technology is a national need. Tools must be made available during the time of declining defense budgets to place defense contracts where they will do the most national good. We can avoid technology loss through proper use of economic power still accessible in the limited defense dollars that will be available. Actions are needed now to ensure that we make the most of this economic asset.

In our changed world, technology is as fundamental in warfare as trained manpower. It has become a principle of warfare. The BASE now needed will be comprised of firms capable of adding to U.S. defense technology—those firms with research and development capability. These are the very firms under the most pressure to leave the industry. There must be a means available to avoid this crisis.

A fundamental conclusion to be drawn from recent events is that developing and sustaining a continually progressing technology base is more important, than building a broad, potential manufacturing base to sustain a protracted conflict. A deep surge capability to provide large quantities of products 6 months or 1 year from the start of hostilities will not be a deciding factor in the outcome of the next Iraq or Panama or Grenada. A technology base composed of high quality developer/producers with the capability of contributing to and advancing the state-of-the-art of ammunition, funded through the available ammo budget, is the only solution to the demanding future presented by decreasing budgets and security expectations by the American Public. The days of the high volume, low technology arsenals are gone, as a single, higher technology weapon today can accomplish what it took hundreds of lower technology items to do in the past.

And so, with these comments as foundation, I offer the following general remarks and specific recommendations as an approach to preparing the conventional ammunition base for its new mission and obtaining the most effective use of current and future ammunition budgets.

First, the Government must build long-term relationships with carefully selected, high quality suppliers that have the capability to both advance technology and efficiently manufacture products. This means that we must recognize, as commercial industry recognized long ago, that the best buy for the military is not necessarily the lowest bid on the immediate contract at hand. Moreover, the ability of a company to contribute to technology advancement through research and engineering must be acknowledged in current military decisionmaking. Technology has its price, and the propensity of the military, to use technically competent companies for development and then jump on the first seemingly low-priced bandwagon at the earliest stage of production, has cost U.S. taxpayers a great deal of money. If we eliminate our technological development infrastructure, we may cost them their future security.

Contract money available during reductions in military spending should be used to preserve the base, capable of making technological change. This means preferential contract awards to firms with capability to perform technological advancement, not the old definition of a base standing by to make the products of the last war, from mature and dated technology.

Increase the use of option contracts in development programs that provide initial production activities to those companies that have technical and production capabilities. Seeking competition from non-developers will always find lower bids because technical staffs cost money. Short-sighted plunging ahead and taking production from developers will simply eliminate our ability to maintain our technical edge.

Increase the use of multiple-year contracts in order to stabilize the military-supplier relationship, and to maintain a lower cost.

Second, the military must find some way to make and implement good value-based decisions. Complexities and inconsistencies in defense contracting have created a challenging regulatory and performance environment where firms doing defense business for decades are withdrawing. But, I believe that the acquisition system is so constrained by rules and procedures and policies and legalities that it is very difficult for a good decision to survive the existing process.

When a good decision flies in the face of a literal interpretation of CICA, the good decision should win. Make the exceptions to CICA supportive of good decisions and usable by procurement officials. Lord only knows we sure have enough auditors to support such a decision.

Legal and Policy impacts are carrying much more weight on procurement decisions than business or preparedness issues. The PCO position must be reprofessionalized, qualified, and given authority for procurement decisions without the constant CYA concern.

Consistent acquisition strategies must be defined, communicated, and, most importantly, maintained. Industry makes important decisions based upon stated acquisition strategies relating to discretionary expenses and application of technical resources.

Finally, attempts by the military to implement TQM initiatives, which are proving so useful in American industry in revitalizing our worldwide competitiveness, should be encouraged and are, by in large, consistent with the comments offered thus far in this testimony. Recognize and encourage excellence, and make long-term commitments to the future with partnerships founded in excellence. Fortunately, I truly believe that we all agree that this makes fundamental sense. Unfortunately, existing procurement regulations and policies make it a difficult, if not an unachievable, objective. TQM should speak for itself and if you do not already have it and/or implement it in the near future, you will become non-competitive and will have nobody to blame but yourself. But by demanding its implementation by contract and reporting of game, we have again increased the paperwork and resultant costs along with the establishment of additional non-essential monitoring and audit requirements by the Government. Let's reduce the paper and provide the product.

I want to thank you for the opportunity to offer these remarks to this subcommittee. The ammunition production base is at a transition point, just as the U.S. military is at a transition in its overall mission. Our success in providing the optimum support to the United States in facing its future challenges may rest in our ability to configure U.S. industry to respond effectively and efficiently to the demand that will be placed on it.

Senator DIXON. Thank you, Mr. Allen. Mr. Appleman.

STATEMENT OF HOWARD APPLEMAN, PRESIDENT, ARMTEC DEFENSE PRODUCTS

Mr. APPLEMAN. Thank you. I, too, appreciate the opportunity to come here. I agree with what my colleagues have said, but I can give it to you from a slightly different perspective. These gentlemen represent companies that are primes. I am basically a subcontractor. In fact, one of my good customers is sitting here right at the table with me.

I also have had the opportunity, because of my background, to have seen what has happened to our industrial base from the government standpoint. I worked for the government in significant positions for about 11 years, and I have worked in industry ever since then, and I also agree that Desert Storm was really not a good test as to what we could do in terms of responding because it was, thank God, a very short war. I realize there were some surges, but it really was not a good test.

Now, many studies have been conducted and have been referred to. I ran across one recently which I would like to offer to you to do further work on. It was done at the Defense Systems Management College. It was a very recent study. It was completed at the end of this past year. [Study was completed at the end of 1990.]

They categorized various industries and how many were leaving the defense industrial mobilization base. Unfortunately, they did not address ammunition as an industry, but the data is there and I have spoken to them, and if somebody asked them to they could just punch a few buttons on their computer and figure out what it was.

But overall, of over 200 companies that did respond, over 20 percent are either leaving or have left, or are seriously thinking of leaving or not joining the industry. I am sure that the ammunition industry would be represented equally as well.

There have been other groups doing studies, too. I belong to a group out in California called the President's Roundtable. It is a bunch of Southern California companies, and they have done some work on the things that bother us—the overregulation, the overauditing, the self-governance issues, and things like that—and I would like to also submit those things for someone to study and look into further. I think they are very important.

Senator DIXON. Are those contained in your prepared remarks, Mr. Appleman?

Mr. APPLEMAN. No, sir, but I am willing to leave them here, and if you would like to enter them into the record——

Senator DIXON. If you would like to offer that as part of the record, we will see that it is reproduced in the record. I think it would be advisable to do that.

Mr. APPLEMAN. Yes, sir. I am very willing to do that.

Senator DIXON. Will staff see that that gets in the record, please?

[The information follows:]

DEFENSE PROCUREMENT INDUSTRIAL BASE STUDY: WHY FIRMS ARE LEAVING THE DEFENSE MARKET

5 December 1990

Defense Systems Management College

EXECUTIVE SUMMARY

The purpose of this study was to demonstrate whether or not there is an unacceptable exodus of firms from the defense sector or a marked reluctance on the part of new corporations to undertake defense business as a result of administrative burdens imposed by the Department of Defense. If so, the report was to identify the specific burdens that firms find onerous and recommend specific corrective actions to address those concerns.

Within the three months allotted to conduct the study, the Defense Systems Management College sent out 831 questionnaires to companies from a cross-section of industries and tiers of the defense industrial base and received 244 responses. These written responses were supplemented by approximately 50 personal interviews with company or association executives. The survey queried private firms about their experience in the defense market, their attitude toward it (e.g., did they intend to remain or diminish their involvement?), the primary administrative burdens they faced, as well as the factors that, if changed, would provide the greatest incentive to remain in or seek defense business.

Although it is impossible to determine the precise level of exodus of firms that is considered unacceptable, it is significant that **52** firms, a full **21%** of the entire survey, indicated that they either do not want, or intend to diminish or leave defense business. Respondents also "warned" that fear on the part of private firms of retribution by DoD rendered some answers less than candid. There is probability that the figure is actually higher.

The majority of the firms indicated they intended to remain in the defense market. However, they expressed a significant level of dissatisfaction with conducting business with the Department of Defense. The most important factors, whether mentioned as administrative burdens or as incentives to remain in the defense market, are the following:

1) procurement policies,
2) audit procedures,
3) bidding methods,
4) late payment,
5) government attitude/competence,
6) DoD specifications, and
7) profitability.

Several other factors were mentioned repeatedly that merit attention here. First, the disproportionate time demands placed upon senior management within these firms, often for the most mundane tasks, was of tremendous concern. As one firm said, "There is something fundamentally wrong about a system that requires a contractor to assign its best people to proofread invoices instead of technical reports."

The second factor concerns the bad reputation acquired (and publicized) rapidly at even the hint of what has now become a catchword of "fraud-waste-and-abuse." If a firm is lucky enough to have commercial work, such bad press effectively damages other business. The risk is seen increasingly as too great.

Third, respondents repeatedly displayed a strong feeling of inefficacy. The attitude and level of competence of many government employees baffled, disheartened, and deterred a significant percentage of [potential] members of the defense industrial base. "Doing business in what amounts to a punitive environment is extremely distasteful for all concerned." Further, the interviews in particular expressed the universal opinion among industry leaders that there is no high-level acquisition executive within the Department of Defense, including the Under Secretary of Defense for Acquisition, that has the authority to handle the problems that exist.

Specific information emerged that indicated the uniqueness of each industry. Trapped in a monopsony, the **shipyards** want out of the defense market more than any other industry. Unlike other industries, they have few problems with DoD profit policy but are most concerned with timely payment for work accomplished. The **aerospace** industry was most likely to remain in the defense market (not necessarily out of choice) and had the most significant problems with procurement policies and auditing procedures.

The **electronics** industry followed the range of the other responses, but was the industry most concerned with procurement policies. **Engineering services/software** industry included the quality versus cost issue as one of the greatest incentives to remain. The **industrial fasteners** industry appeared least dissatisfied but their biggest concern was the influx of defective fasteners from foreign suppliers. Members of the **manufacturing** industry were the least likely to remain in the defense market, perhaps because they have the option of commercial work.

One firm posed the following provocative questions:

1. Does the DoD act in the best interest of the security of the nation, including its economic stability, by creating complexity where none is needed?

2. **Are the stringent, ill-defined, often punitive and highly expensive policies and requirements a positive or a negative force in ensuring the best buy for the taxpayers dollar -- to say nothing of the quality of the defense the taxpayer is buying?**

The following conclusions and recommendations emerged from this effort:

1. **Conclusions**

   a. A significant portion of respondent firms want to reduce the level of involvement with DoD as a direct result of administrative burdens inherent in such business.

   b. Of those firms who intend to remain in the defense market, there exists a highly significant level of dissatisfaction that could encourage them to reduce their level of involvement.

   c. The perceived administrative burdens rated as most severe reflect subject areas capable of attack through leadership and policy change within the existing Departmental authority.

   d. If accomplished, the actions recommended by the Defense Management Report (DMR) will address the areas of concern reflected in this report. The key aspect is implementation of the difficult DMR actions not just cosmetic issues.

   e. Without serious attention, the decline of the defense industrial base may reach an unacceptable and irreversible rate.

2. **Recommendations**

   a. Continue high-level emphasis and implementation of the recommendations within the DMR. Convene a series of workshops with leaders of industry and the Office of the Under Secretary of Defense for Acquisition to grapple with the problems highlighted by the study data.

   b. Recommend an introspective analysis by the Office of the Under Secretary of Defense for Acquisition be conducted. This analysis is recommended in order to utilize the significant leverage of this organization which contains the leaders and policy makers of the acquisition community within the Office of the Secretary of Defense. Where they lead, the rest of the acquisition world will follow.

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I. INTRODUCTION

A. Rationale

The purpose of this study conducted by the Defense Systems Management College (DSMC) is to demonstrate whether or not there is an unacceptable exodus of firms from the defense sector or a marked reluctance on the part of new corporations to undertake defense business as a result of administrative burdens imposed by the Department of Defense. The study addresses burdens which also may have been imposed Congressionally or by other agencies such as GAO. Many government and industry sources claim that the Defense-related business is being rapidly abandoned. There is particular concern about the all-important lower-tier contractor levels, where there has been a reduction of competition/sources for several years. One report, entitled "Deterrence in Decay: The Future of the U.S. Defense Industrial Base," by the Center for Strategic and International Studies (CSIS), states that from 1982 to 1987, the number of firms providing goods to the Department of Defense fell from more than 138,000 to fewer than 40,000. Although this information has not been reconciled with the data in the DoD Defense Contract Action Reporting System, many sources from industry and government agree that there has been a significant change.[1]

U. S. national security is no better than the quality of the industrial base. For this reason, it is important to determine whether there is an unacceptable exodus of contractors from the research, development, or production sectors upon which DoD depends or a significant reluctance on the part of industry just to do business with the DoD. If such an exodus exists, corrective action is needed to reverse this trend. Policy recommendations must be based on the specific factors that firms find onerous.

Declining defense outlays and changes in the international situation may point toward a system of "natural selection" within the defense industry. Market forces would merely trim any industry overcapacity that might currently exist. However, a negative growth defense market may exacerbate the trend of industry leaving the defense sector. Furthermore, there is no guarantee that those who leave merely shift to the commercial market, ready to be converted back to defense when needed. Nor is there evidence that such convertibility is a feasible alternative.[2] A key issue involves which firms leave the market; departure of the wrong ones may leave weaker, less technical, capable firms. In some industries, such as shipbuilding, there is no commercial market within which these companies can take refuge. To continue with the example, it is unlikely that the prime coastal property upon which these yards have been built will remain "fallow," awaiting the time when another shipyard might be needed.

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[1] See Office of the Assistant Secretary of Defense for Production and Logistics, "MAC Group Study on Profitability - Information Memorandum," March 1988, p. 2.

Further, there are a number of questions that are key industrial base issues yet they are not within the scope of this study effort. These include:

1. To what degree is the Department of Defense losing the lead or access to specific important technologies including key manufacturing processes and techniques?
2. To what degree is the U.S. national security jeopardized by offshore sourcing as a result of a shrinking domestic industrial base?
3. To what degree is the U.S. national security jeopardized by offshore acquisition of U.S. industrial base companies?
4. To what degree is defense "surge" capability being affected by current trends?
5. What data bases are available in government and industry and what does the government need to better understand the dynamics of the industrial base?
6. In view of the rapidly changing international defense environment and the recasting of US defense policy and strategy, what now are the requirements for the US industrial base?

During this time of reassessment of national defense strategy and critical examination of the use of each defense dollar, it is vitally important that the Department of Defense have a clear picture of the dynamics of the industrial base. The making of policy, the preparation of strategic plans, and the allocation of scarce resources by the DoD must be based on sound data and be capable of withstanding close scrutiny by the

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[2] Defense Systems Management College, "Industrial Convertibility Study," estimated completion date: September 1990.

Administration, the Congress and the American public. Most importantly, such policy must serve to defend the national security of the United States.

This effort utilized a survey questionnaire, mailed to over 800 firms, and approximately 50 personal interviews with key contractors at all tiers, to identify the reasons why firms either do not enter or discontinue business with the Department of Defense. Based upon the analysis of this data, the report identifies the specific administrative burdens that corporations find onerous and recommends corrective action on key issues.

B. Related Research

1. Purpose of Study

The decline of the defense industrial base is not a topic that suffers from lack of attention. A plethora of studies exists on the subject. Noticeably absent, however, has been an analysis of the specific reasons for this decline (as stated by those firms actually leaving or considering it) and specific policy recommendations designed to abate the flow where required. The purposes of this study are (1) to demonstrate whether or not there is an unacceptable exodus of firms from the defense sector or a marked reluctance on the part of new corporations to enter the defense market. If there is such an exodus, this study will (2) determine if it is as a result of administrative burdens imposed by The Department of Defense. If so, the report will (3) identify the specific burdens that firms find onerous and (4) recommend specific actions that should be taken to address those concerns.

A corollary purpose of this study is to stem the tide of ill will that flows in both directions between private industry and the Department of Defense. Even those industries that have no alternatives for business other than the defense sector describe an atmosphere of antagonism (exacerbated by both sides) that borders on intolerable. This well-known adversarial environment (which was mentioned repeatedly in survey responses) prompted the use of questions in the current survey that would allow for a freer response from the participating firms, and provide them anonymity if they desired.

It is instructive, however, to consider prior research that has been conducted in the area. In particular, this review considers several documents that

(1) contain the "charges" of industry,
(2) respond with the point of view of the Department of Defense, and
(3) describe the current situation within the defense industrial base and government attempts to cope with it.

In addition, the following questions are key to the data requested and the analysis of the data obtained from the survey.

1. To what degree are private firms leaving the defense sector, diminishing the level of defense business, or refusing to enter?
2. What factors are responsible for this exodus?
3. Can these factors be ranked according to their importance in the decision of a firm to quit the business?
4. Is there a correlation between type, size or tier of the firm and these factors?
5. What specific DoD regulations and related laws contribute to these factors?
6. What is and what creates the environment within which this exodus is occurring?
7. Are these factors necessary for effective work within the DoD?
8. Is there a risk associated with the elimination of these factors? (e.g., Would the government necessarily be subject to more waste, fraud or abuse without the numerous audits that are currently imposed on private firms in the Defense business?)

2. The View from Industry

Several similar surveys have been utilized in other studies. Two of these studies focused primarily on those firms that actually refuse to participate in defense business and their reasons for the decision. They are (1) "An Analysis of Reasons Companies Refuse to Participate in Defense Business," by Professor David V. Lamm of the Naval Postgraduate School, and (2) "An Analysis of the Reasons Why Nonferrous Foundry Subcontractors Refuse to Participate in DoD Business," by Jon Arthur Schauber. Schauber dealt entirely with subcontractors who wanted out of the defense business and 92% of the respondents to the Lamm questionnaire were small businesses that were out or phasing out of the defense sector.

The Lamm study revealed the following as the major reasons why 91 respondent firms wanted out of the defense sector (those marked with a double asterisk appeared in the top 6 of both the Lamm and the Schauber studies):

** burdensome paperwork (with the bidding process mentioned most frequently) (70%),
* government bidding methods (57%),
** inflexible procurement policies (38%),
** more attractive commercial ventures (34%),
** low profitability (32%), and
* government attitudes (32%).[3]

The Schauber study, analyzing 48 firms that identified themselves as foundry subcontractors and uninterested in DoD business, found the following to be the most significant reasons for refusing to participate in DoD business.

** inflexible government procurement methods/policies,
** burdensome paperwork requirements,
** more attractive commercial sales to non-DoD prime contractors,
* overly restrictive quality (too high) standards,
* inconsistent quality requirements,
** low profitability/lost money on government related subcontracts.[4]

In February 1988, the MAC Group (a management consulting firm) published a study funded by the Aerospace Industries Association, the Electronic Industries Association, and the National Security Industrial Association entitled "The Impact on Defense Industrial Capability of Changes in Procurement and Tax Policy 1984 - 1987." This study was updated in January 1989 to allow for changes that had been made in progress payments, special tooling policy, and tax policy since the time of the original report. Although the changes were favorable to industry, the study found that:

(1) The return on investment on the programs analyzed would have been less than the return necessary to preserve shareholder value.

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[3] David V. Lamm, "An Analysis of Reasons Companies Refuse to Participate in Defense Business," Report No. NPS-54-87-003, The Naval Postgraduate School, March 1987. See also David V. Lamm, "Why Firms Refuse DoD Business: An Analysis of Rationale," NCMA Journal, Winter 1988, p. 49. The thesis by Jon Schauber (see Note #4) provides a complete description of the Lamm study, p40.

[4] Jon Arthur Schauber, "An Analysis of the Reasons Why Nonferrous Foundry Subcontractors Refuse to Participate in DoD Business," a thesis submitted to the Naval Postgraduate School in June 1988. This thesis contains a concise and comprehensive overview of the defense industrial base, p. 96.

(2) Profits will be substantially reduced by an average of 23% on the companies defense business.

(3) Companies will be forced to borrow heavily, but the additional financing required will, for some companies, likely exceed the amount that can be borrowed.[5]

This study, as stated in the title, was concerned primarily with financial factors that rendered defense business unattractive. These were (1) cost sharing on new development programs, (2) DoD profit policy, (3) lower progress payment rates, (4) special tooling investments, (5) lower cost recovery, and (6) tax law changes. It did, however, make specific policy recommendations related to the restoration of an appropriate risk-return relationship to the industry. Analysis was based on financial data from nine firms.

3. The View from the Department of Defense

The views of industry are merely one side of the equation. There are (as might be expected) disagreements between industry and the Department of Defense on descriptive statistics concerning the defense industrial base. There is also a lack of consensus on the interpretation of the effects of specific policies. However, there is little disagreement on the general trends within the defense industrial base as a whole.

4. 1988 USD(A) Study on Industrial Competitiveness

In July 1988, the Under Secretary of Defense for Acquisition, submitted a study to the Secretary of Defense entitled "Bolstering Defense Industrial Competitiveness." This document stated that the decline within numerous basic industries could leave the United States without the industrial capabilities critical to national security.

The study included an action plan to bolster industrial competitiveness that contains six strategic thrusts:

(1) forging the right relations with industry;
(2) improving the acquisition system;
(3) establishing defense industrial strategic plans that support our current military strategic plans;
(4) developing manufacturing capabilities concurrent with the development of weapon systems;

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[5] The MAC Group, "The Impact on Defense Industrial Capability of Changes in Procurement and Tax Policy, 1984-1987," February 1988, p. 2. See also "Updated for Changes in Progress Payments, Special Tooling Policy, and Tax Policy," January 1989.

(5) laying the foundation now for the technical skill base required for tomorrow's defense needs; and

(6) ensuring that industrial base issues important to our defense benefit from the full spectrum of potential policy remedies, when appropriate.[6]

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[6] Robert B. Costello, Under Secretary of Defense for Acquisition "Bolstering Defense Industrial Competitiveness: Preserving our Heritage - The Industrial Base - Securing our Future," A Report to the Secretary of Defense, July 1988, p. vii.

II. STUDY METHODOLOGY

A. Sample Population

The survey was sent by mail to approximately 800 private companies throughout the United States. The sample population was designed to include firms that had a high degree of probable specific knowledge about doing business with the Department of Defense.

In order to ensure such specific knowledge of the core question of the study, i.e., why firms are leaving the defense industrial base, a random sample was used which did not generate the same percentage of firms from each industry. Respondents included firms of all sizes and profitability; however, the sample was not constructed to balance and equal the number of all characteristics. Membership lists of associations representing the major segments of the defense industrial base were used. The resulting representative sample cuts across all sectors and tiers of the defense industrial base and includes a wide variety of products, processes, and services.

The sample population included the following:

- approximately 50 members of the Aerospace Industries Association,
- 160 members of the Electronics Industries Association, selected systematically,
- approximately 50 members of the Shipbuilders Council of America,
- approximately 150 members of the Industrial Fasteners Institute,
- 75 members of the National Machine Tool Builders Association, selected systematically,
- 246 members of the American Defense Preparedness Association, selected randomly,
- approximately 40 members of the Procurement Roundtable, and
- approximately 100 other firms on file with the DoD Office of Industrial Base Assessment as "not wishing to be considered for federal contracting."

In addition, personal interviews were conducted either in person or by telephone with over 50 company and association officers with a strong interest in improving the acquisition process. The analysis that follows is based on both the responses to the questionnaire as well as the information gained in the personal interviews.

B. Survey Instrument

A questionnaire was chosen over other methods of acquiring data for several reasons: (1) it provides anonymity to those who desire it, (2) it can reach a large number of potential respondents, and (3) respondents answer the identical questions.

If a respondent was willing to provide it, the questionnaire asked for the name and address of the respondent. Personal interviews with those individuals then provided further information on the specific problems, attitudes, and perceptions held by industry about doing business with the Department of Defense. Such interviews contribute to a sense of efficacy on the part of the respondents, many of whom (according to comments made in both the DSMC and the Lamm questionnaires) have serious problems with government attitudes toward industry.

The questionnaire (see Appendix A) included a mix of question types: demographic or company descriptive, forced response, multiple responses, and open-ended. It was designed to accomplish the following:

1. determine company demographics (size, type of firm, percentage of defense business, ratio of commercial business to defense work, etc.);
2. explore reasons for private firms to leave the defense sector, diminish the amount of defense work done, or refuse to enter in the first place;
3. be objective but designed with several open-ended questions that will encourage candor and creativity on the part of the respondents; and
4. be short, manageable and fully utilizable.

This DSMC questionnaire was designed with several of the aforementioned surveys in mind. For example, Professor Lamm obtained data on the reasons firms leave the defense sector through the use of a multiple response question utilizing a list of anticipated responses, which the respondent was asked to number in order of priority of importance. The corresponding question in the DSMC study questionnaire was designed as open-ended, allowing the respondent to answer at will.

Professor Lamm found that there was little difference between those companies actually refusing DoD business and those who were merely dissatisfied. His study, however, focused mainly on the 91 firms who were actually leaving the defense market.

The Schauber study, analyzing 48 firms, found that some of the typical reasons that firms do not participate in DoD business were not important to nonferrous foundry subcontractors.[7]

This DSMC study, therefore, did not distinguish between firms that had left or were leaving, and those that expressed severe problems, including those that openly admitted they had no other alternative. In addition, the data corroborated the importance of **government attitude/competence** as a significant problem, thus justifying the initial decision to focus as well on the milieu within which business is conducted with the Department of Defense. In fact, approximately 33% of the respondents named **government attitude/competence** as a major deterrent to doing business with the Department of Defense, making it the fifth most frequently mentioned problem. Indeed, it was the second highest response (29%) to question #4, i.e., the change in procurement that would provide the biggest incentive for remaining in the defense sector. References to **government attitude/competence** generally focused on a lack of customer orientation, knowledge, and helpfulness.

Respondents were told that the survey was "part of a three-month study... to determine whether there is an exodus of firms from the Defense sector...." Part I dealt with "Industrial Attitudes toward the Defense Market." (See Appendix A for complete questionnaire.)

Part I also contained the two most important questions in the survey, Numbers 3 and 4. These open-ended questions asked the following:

3. What are the primary administrative burdens that you have experienced in doing business with the Dept. of Defense? For example, payment, bidding, accounting or auditing procedures, technical data rights, specifications, etc. (Please rank these in order of importance. Specific examples would be most helpful.)

4. What change(s) in Defense procurement would provide the biggest incentive for you to enter, re-enter and/or increase your role in Defense business?

These questions allowed a freer response than a multiple response question. In addition, few responses were ranked in order of importance, therefore, all factors that respondents found "burdensome" were included in the analysis that follows, not just the three most important factors. Eight blank lines followed these questions, ample space for a mere listing of "administrative burdens." (The administrative burdens were meant to focus on onerous policy and paperwork type requirements, and respondents expanded this issue to include any burden such as legal or regulatory.) However, 22% of the respondents chose to provide additional (in some cases, comprehensive) information on separate pages.

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[7] Ibid, p. 132.

The answers to questions 3 and 4 were identified according to the following list of possible reasons and coded:

A. Late payment or nonpayment
B. Government furnished equipment problems
C. Instability of the Government market
D. Government bidding methods
E. Technical data rights problems
F. Defense quality specifications
G. Audit procedures and DCAA audits
H. Profitability
I. More attractive commercial ventures
J. Procurement policies/paperwork/regulations
K. Government attitudes/competence
L. Prime contractor/subcontractor methods
M. Lost the business to my competitors
N. Investment/capitalization requirements
O. Technology changes
P. Congressional involvement
Q. Not enough defense business
R. Quality vs. cost (low-balling, etc.)
S. All others
T. Accounting practices
U. Inspection requirements
V. Constructive response (no problems with DoD business, problems solved through specific methods, etc.)

Part I, Number 5, asked about simultaneous production for commercial and defense markets. This question is directly related to an ongoing study at DSMC and provides interesting interpretations to the other data obtained by the survey, as will be seen in the analysis below.

Part II obtained information on company classification, such as Standard Industrial Classification (SIC), number of employees, breakout of business (prime, subcontractor, commercial), and annual sales volume.

III. SURVEY RESULTS

A. Respondent Population

Of the approximately 831 questionnaires that were mailed, DSMC received 244 responses. a return rate of almost 30 percent.[8] The major industrial groups reflected in the respondent population were defined as follows:

(1) **shipbuilding:** new building yards and ship repair facilities,
(2) **aerospace:** aircraft and missile manufacturers and supplies;
(3) **electronic:** communications and electronics manufacturers and suppliers;
(4) **engineering services/software:**professional services and software-related companies;
(5) **industrial fasteners:** companies engaged in supply or manufacture of screws, bolts, nuts, etc. and
(6) **manufacturing:** all manufacturing firms not listed in categories 1-5 above.

Those firms that responded to the survey came from the following industry groups, showing the percentage for that group of the total survey.

TABLE 1 (244 firms)
Respondent Population According to Industry[9]

Industry	Total Responses	% of total survey respondents (response rate)
1. Shipbuilding	17	7%
2. Aerospace	27	11%
3. Electronic	50	20%
4. Eng/Software	31	13%
5. Ind. Fasteners	21	9%
6. Manufacturing	67	27%
7. Other	31	13%

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[8] 20 surveys arrived once analysis was begun so they are not included in the data.

[9] Most of the following tables have been translated into histograms and can be found in Appendix B.

Not surprisingly, the highest percentages of responses came from the industry groups that had the most members in the sample population. Three times the number of questionnaires were mailed to electronics and manufacturing firms.

Firms also identified themselves according to annual sales volume.

TABLE 2 (244 **firms**)
Respondent Population by Annual Sales Volume
(combined Defense and Commercial)

	Number	% of total survey respondents
Under $1M	9	4%
$1M - $10M	59	24%
$10M - $50M	163	67%
No Response	13	5%

It is interesting to compare this respondent population with that analyzed in both the Lamm study (92% small business) and the Schauber thesis (all subcontractors). While these studies focused on specific groups within the defense industrial base, the DSMC study cuts across all business groups. However, 67% of the respondents were from companies with an annual sales volume of over $10M.

The six industry groups were then defined more precisely by breaking those groups down by their annual sales volume, as shown in Table 3.

TABLE 3 (244 **firms**)
Respondent Population by Industry and Sales Volume

Industry	Under $1M	$1M - $10M	Over $10M	No Answer
1. Shipbuilding	0	0	15(88%)*	2
2. Aerospace	0	3(11%)	24(89%)	0
3. Electronic	1(2%)	10(20%)	39(78%)	0
4. Eng/Software	2(6%)	12(39%)	17(55%)	0
5. Ind. Fasteners	0	10(48%)	11(52%)	0
6. Manufacturing	2(3%)	19(28%)	46(69%)	0
7. Other	3(10%)	5(16%)	10(32%)	13

* Percentages are of industry group, not total survey.

The respondent population that emerges has the following characteristics. Approximately 67% of the firms that responded are large, with an annual sales volume of over $10 million. The majority of the remaining firms are medium-sized (24% with between $1M and $10M) and the final 4% are small businesses, with less than $1 million per year in sales.

In addition, within the six industry groups, the firms can be arranged by size as well. All industry groups were represented predominantly by large firms. Industrial fasteners has the most even spread, but only between large and medium companies.

In the initial analysis, this respondent population was considered as a body, that is, the significance of the answers lay in their percentage of the total survey. At a certain juncture, however, the answers become significant as they relate to (i.e., are a percentage of) their own industry and to the other five industry groups. As will be seen in the analysis that follows, many unique qualities emerge that are industry-specific. If not discussed where they first appear, they may be included in the discussions of the individual industries at the end of this section.

B. Experience and Attitude Toward Defense Business

In response to questions 1 and 2 regarding company experience and attitudes toward defense business (see survey in Appendix A), the majority by far were currently in the business and intended to remain. Telephone interviews with many of the respondents specified that, if most firms were able to leave the defense market, they would. The unanswered question, then, when firms are described in questions 1 and 2 as being in the defense market and intending to remain in the defense business, is whether these firms even have a choice in the matter. Clearly for many, it is a question of no other market existing (such as the monopsony within which the shipbuilding industry operates) or the business is inextricably tied to DoD, as described by several aerospace firms. Table 4 displays the experience of respondent firms in the defense business.

TABLE 4 (244 firms)

Experience of Respondents in the Defense Business
(Survey question 1)

	Prime (%) Only	Sub (%) Only	Prime/% Sub
1. Never entered	7 (3%)	2 (.8%)	11(5%)
2. Unsuccessful attempts	10 (4%)	6 (3%)	6(2%)
3. No longer have DoD business	5 (2%)	2 (.8%)	5(2%)
4. Currently in DoD business	41(17%)	34 (14%)	124(51%)
5. Reduced involvement	8 (3%)	15 (6%)	7(3%)

[N.B. Numbers total greater than 100% because some firms checked multiple categories. For example, a firm that may have unsuccessfully attempted to enter #2 may have checked #1 as well. Firms that have never entered defense business and are listed as prime only or sub only are so listed based on unsuccessful attempts in that capacity as noted on their survey responses.]

The following table shows the attitude of the respondent firms toward DoD business, broken down by prime and subcontractors, or both.

TABLE 5 (244 firms)

Attitude Toward Obtaining DoD Business
(Survey question 2)

	Prime (%) Only	Sub (%) Only	Prime/Sub (%)
1. Do not want DoD business	6 (2%)*	6 (2%)	6(2%)
2. Intend to diminish or leave	9 (4%)	10 (4%)	15(6%)
3. Intend to remain	39 (16%)	34 (14%)	114(47%)
4. Want to enter	8 (3%)	3 (1%)	11(5%)

* As in Table 4, these percentages exceed 100%.

The key issue addressed in tables 4 and 5 involves experience versus attitude. It is an important reference point to determine how many firms in the study have been successful at penetrating the defense market as well as the attitude of firms to obtain defense business.

As seen in Table 6, of those firms that no longer conduct business with the Department of Defense or have reduced their involvement (17% of the entire survey), the following table shows the breakdown of these dissatisfied firms within the six industry groups and then by size of industry.

TABLE 6 (**42 firms**)

Firms that No Longer Conduct or Have Reduced Defense Business

(Survey question 1)

			% respondents from each industry
1.	Shipbuilding	1	6%
2.	Aerospace	4	15%
3.	Electronics	8	16%
4.	Engr Svcs	3	10%
5.	Fasteners	5	24%
6.	Manufacturing	12	18%
7.	Other/No Ans	9	29%

1.	Under $1M	5
2.	$1M - $10M	11
3.	Over $10M	24
4.	No Response	2
	TOTAL:	42 firms

The firms in Table 6 reflect companies that have already changed their status within the defense industrial base (either voluntarily or involuntarily) (survey question 1). The next section highlights those firms that intend to change their status (survey question 2).

C. Firms that Intend to Diminish or Leave Business with the Department of Defense

Question #2 inquired about attitudes toward obtaining defense business. The possible answers were: 1) do not want Defense business, 2) in Defense business but intend to diminish or leave, 3) in the Defense business and intend to remain, or 4) interested in entering the Defense market. The following tables show the breakdown by industry and annual sales volume of the 34 firms (**14%** of entire survey) that intend to diminish or leave DoD business (either voluntarily or involuntarily).

TABLE 7 (34 firms)

Firms that Intend to Diminish or Leave DoD Business: By Industry Group and Annual Sales Volume

(Survey question 2B)

			% of respondents from each industry
1.	Shipbuilding	4	24%
2.	Aerospace	3	11%
3.	Electronic	7	14%
4.	Eng Svcs	4	13%
5.	Fasteners	1	5%
6.	Manufacturing	9	13%
7.	Other/No Ans	6	19%

1.	Under $1M	1
2.	$1M - $10M	5
3.	Over $10M	23
4.	No response	5

TABLE 8 (34 firms)

Firms that Intend to Diminish or Leave - Based on the Following Administrative or other Onerous Burdens:

(Survey question 2B and 3)

1.	Audit procedures	25	74%*
2.	Procurement policies	23	68%
3.	Government attitudes	14	41%
4.	Late payment	14	41%
5.	Defense specifications	11	32%
6.	Bidding methods	11	32%

* % of those 34 firms that intend to diminish or leave the defense market that listed these factors.

Incentives to Remain (2B and 4)

1.	Procurement policies	18	53%*
2.	Government attitudes	16	47%
3.	Profitability	8	24%
4.	Bidding methods	6	18%

Of these firms that intend to diminish or leave the defense business, Table 15 displays the factors listed most frequently in questions 3 and 4 as primary administrative burdens and changes in procurement most likely to provide incentives to stay. Recall that they are the same six factors listed by the total survey.

However, for the only time in the entire questionnaire, **procurement policies** was replaced at the top of the list. **Audit procedures** was named most frequently (74%) as the primary administrative burden by those firms that intend to diminish or leave the defense market, however, changes in **procurement policies** were considered to be the most important changes as an incentive to remain.

1. Government Attitudes/Competence

In fact, many respondents mentioned auditors specifically when discussing **government attitudes** as well. It appeared from specific comments that if DoD auditors were competent and did not have the attitude that the contractor-is-a-criminal-it-is-my-job-to-find-fraud, **audit procedure** would not be the problem that it is. One embittered contractor said there were "too damned many auditors with IQ's the equivalent of their shoe size!"

> The system seems to presume criminal conduct is rampant in Industry and that government's role is to police and aggressively prosecute any allegation. It strongly discourages administrative settlements even where it is clear that corporate intent and/or misconduct is not present.... DCAA auditors, who are often relatively inexperienced, are encouraged to prematurely report suspected "indicators" in a covert and unregulated manner to government investigative agencies.

This same unsolicited document named the handbooks (published by the DoD Inspector General) by which the government instructs its auditors: Indicators of Fraud in DoD Procurement, Handbook on Scenarios of Potential Pricing Fraud, and Handbook on Labor Fraud Indicators. The following examples were pulled from these documents.

> -- the purpose of this handbook is to stimulate the contract auditor's imagination regarding the detection of labor fraud indicators.
>
> -- the auditor should "think fraud" when making a review. This awareness factor cannot be overemphasized.

As a result, any appearance of contract noncompliance or defective pricing is easily confused with criminal fraud.

Further exacerbating the problem is the issue of double audits. According to one source, a total of 22,775 auditors, investigators, quality inspectors, and administrative and support people often ask the same questions and look at the same records.

Ostensibly, they just don't trust each other's findings.[10] According to one firm, the government people reviewing the programs are usually more numerous than their own employees.

In 1983, the number of auditors doubled at one large shipyard. Currently, DCAA has over 600 government representatives assigned to this one yard alone, with 37 of them in residence. An estimated 60,000 manhours of audits are performed annually at this yard. "Furthermore, a large percentage of audits performed in recent years has been directed at reviewing management systems rather than at verifying contract costs." [emphasis in the original]

Another firm complained of the rules on allowables and unallowables and described "DCAA audits using incompetent people making arbitrary decisions." The example was then given of one auditor who tried to render unallowable a company's contribution to the employee retirement plan.

> The impact is that to do business in a government approved manner, your cost structure is significantly higher. DCAA rules are substituted for good business decisions and judgments. The long-term effect is to force a company into choosing between DoD business... and the commercial sphere.... DoD argues that the higher costs are paid for by the DoD allowed OH and G&A; however, companies are forced by DCAA to apply the same rules to commercial efforts by aggressive audits, as DCAA assumes that cheating is going on.... Thus, eventually, you get companies virtually 100% dependent on DoD business, as mixed companies are forced into one area or the other.

D. Primary Administrative Burdens and Incentives to Remain

Questions 3 and 4 are critical to determining the specific reasons why firms are a) leaving the defense sector, b) reluctant to enter the defense market, or c) are extremely dissatisfied with business relations with the Department of Defense. Although the questions were designed as open-ended, the answers were coded according to a list of 22 possible responses. (See Section IIB.)

The most frequent responses to questions 3 and 4 are shown in Tables 9 and 10.

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[10] Debra Polsky, "Industry Sees Double Over Audits," Defense News, September 18, 1989, p. 73.

TABLE 9 (244 firms)
Six Primary Administrative Burdens in DoD Business
(Survey question 3)

	# of respondents	% of total survey respondents*
1. Procurement policies[11]	139	57%
2. Audit procedures	112	46%
3. Bidding methods	92	38%
4. Late payment	82	34%
5. Government attitude	80	33%
6. DoD specifications	74	30%

* Recall that respondents were able to list as many answers as desired to questions 3 and 4.

TABLE 10 (244 firms)
Six Changes Providing Greatest Incentive to Stay in DoD Market
(Survey question 4)

	# of respondents	% of total survey respondents
1. Procurement policies	131	54%
2. Government attitude	71	29%
3. Bidding methods	38	16%
4. Late payment	29	12%
5. DoD specifications	28	11%
6. Profitability	27	11%

E. Firms that No Longer Conduct Business with DoD or Have Reduced their Involvement

The previous tables (9 and 10) reflect the burdens and incentives for all respondents. However, it is interesting to compare the total survey answers to questions 3 and 4 with those firms that no longer conduct business with or have reduced their involvement in the Department of Defense. Tables 11 and 12 show the most frequently mentioned responses. The results reflect that the top two issues for both groups are the same, and additional issues remain similar with slight changes in priority.

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[11] A more detailed definition of procurement policies is given in Section I-1.

TABLE 11 (42 firms)

Firms that No Longer Conduct or Have Reduced DoD Business:
Primary Administrative Burdens
(Survey questions 1:C,E and 3)

1.	Procurement policies	26	62%*
2.	Audit procedures	18	43%
3.	Government Attitude	15	36%
4.	Bidding	17	40%
5.	Late payment	13	31%
6.	DoD Specifications	11	26%

* % of those 42 firms that no longer conduct or have reduced DoD business that listed these factors.

TABLE 12 (42 firms)

Firms that No Longer Conduct or Have Reduced DoD Business:
Primary Incentives to Stay
(Survey questions 1:C,E and 4)

1.	Procurement policies	20	48%
2.	Government attitudes	15	36%
3.	Bidding methods	8	19%
4.	Profitability	6	14%
5.	Investment/Capitalization	5	12%

(In addition to the six factors listed in Table 11, firms that had left the Defense market or reduced their business also listed with equal frequency (2 firms, 7%) quality vs. cost; prime-sub relations; technical data rights; instability of government market; and constructive criticism.)

F. Firms that Continue to Conduct Business with DoD

As shown above in Table 9, 57% of the firms listed procurement policies as a primary administrative burden. The other five factors (of the top six) were, in decreasing order of frequency: audit procedures (46%); bidding methods (38%); late payment (34%); government attitude (33%); and DoD specifications (30%). Table 11 shows that the same reasons for dissatisfaction presumably drove other firms out of the market. In fact, as will be seen in Table 14, the same "top six" factors are listed by those firms that are in the defense market as well as those intending to remain (Table 19).

One large manufacturing firm provided the following concise summary of burdens.

> A host of conditions exist that I believe, if uniformly understood, would deter even the most

> determined from competing for defense contracts if they were not already in the business. Overlapping and competing agencies (DCAA, DCASR, among others), contracting officers with little knowledge of manufacturing, misguided laws, criminalization of the acquisition process, cost accounting standards, audit after audit, and a "hanging judge" mentality in the DoD IG, DCAA, and the congressional arena are just a few of the problems faced. I frequently wonder if ideology is not more of a motivating factor on the part of some so-called reformers than is "cleaning up the defense industry."[12]

A similar, comparative look at the top six primary incentives to remain in the defense market reveals five of the same six factors with several very important differences. First, **government attitudes**, #5 on the other lists, comes in at #2 in order of importance for greatest incentives to remain. As seen in Table 12, for those firms that have left the defense market, **government attitudes** remains #2 but **profitability** moves up to #4 and **investment/capitalization** is #5. In addition, instead of **audit procedures** at #6, **profitability** is the issue that, if changed, is most likely to entice firms to stay in the business. It is also one of the most misunderstood issues in the area. This comparison indicates that generally the key burdens specified are the issues which can provide the best incentive to remain, if changes or improvements are implemented.

1. Profitability

Unfortunately for the defense industrial base, for the Department of Defense, **profit** is a dirty word. Respondents noted that few government personnel understand that, in order to operate, a private firm must make a profit. In any area, there will always be those who abuse the system and DoD must work to eliminate such offenses. Respondent after respondent complained of the attitude within the government that all contractors were criminals, as "proven" by their desire to make a profit.

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[12] Many of the quotations in this analysis taken directly from the survey responses may appear quite harsh in their judgment toward the Department of Defense. The position of the Defense Systems Management College was to use direct respondent quotes when their summary reflected the general trend of many respondents. The reader is reminded, however, that in all fields relying upon a public response, those with negative views are most likely to make them known.

According to one respondent, a "typical defense contractor can AT BEST hope to make 5-8% profit (as a percent of sales)." [emphasis in the original]

Another respondent noted that:

> In commercial companies, the limit is much higher; with 10-12% not unusual. The typical company does not maximize its profit potential all the time. DoD companies have to subtract unallowables from the profit limit, which are often the normal costs of doing business (e.g., some travel costs, advertising, etc.). This further lowers the profit potential. Typically, profit is in the 2-5% range for DoD companies.

According to one large, established manufacturing firm, discounts in stock trading (30% of real value in this particular case) reflects "the market's distaste for the declining financial performance of defense business and the poor future prospects in a risky and volatile industry."

Profits almost appear as a measuring rod for auditors. Straight contract costs cannot be reduced beyond a certain point. Profit, however, can and the attempt is made to do so without any appreciation for its role in private industry.

2. Linkage of Issues

As will be seen over and over again, many of the potential reasons for dissatisfaction are linked. In Table 32, for example, the aerospace industry links the issues of **technical data rights** and **investment/capitalization.** There is a significant disagreement between government and industry. Several respondents felt that... DoD thinks it is industry's "role" to make these investments. The survival of a firm, however, is often too closely tied to the need for nearer-term profits. Even the issue of **late payment** comes into play. In fact, many of the smaller businesses who responded spoke of the impossibility of even "making payroll" with the typical DoD payment schedule.

Late payment was mentioned repeatedly and often in much detail.

> ....getting to a valid invoice can be as large a task as building the product. Copies of paperwork routinely have to be sent to at least four different places and each seems intent on finding some flaw in how it was completed so it can be sent back to the contractor who must "correct and resubmit" the form. Payment offices and DCASMA personnel "nitpick" invoices to death as if

> they received a commission on all invoices not paid. One example of this is rejecting a form that had "1" as the item number instead of "0001."

One of the most poignant responses came from a small business (11 - 18 employees), that was recently forced to cease normal business operations after 26 years as a direct supplier to the Department of Defense. Overdue and pending receivables as of January 31, 1990 totalled $76,109.39. After negotiating a termination for 22 contracts, this manufacturer of spare and replacement aircraft parts is holding an auction in May 1990 to sell the company's assets.

Repeated, unsuccessful attempts to rectify the situation directly led to the following conclusion about the attitude of the government.

> Telephone calls and letters to the payment office are to no avail. Our phone bill reflects the prevalent attitude, "Put them on hold long enough, they'll hang up." Letters go unanswered. There is very little recourse in dealing direct.[13]

It is particularly interesting that the company in this example was not on the original sample population list. The president had received copies of the DSMC questionnaire from associates. According to documents, the company is leaving the defense market "primarily due to the following:"

- -- timely payments,
- -- cash flow problems that required loans to meet payroll and other fixed expenses (these "interest-free loans" for the government "cost money which reduce already depressed margins"),
- -- resignation of personnel because of financial problems, which directly affected ability to perform, and
- -- delivery delays and higher prices because of necessity to exceed established credit lines.[14]

One of the most important passages was contained in the cover letter. After revealing that several colleagues had chosen not to reply, the president of this small firm gave the following caveat. "Since there is an underlying mistrust for the bureaucracy and the compounding effect that potentially can impact on a contractor's business, your study may not have a high degree of accuracy." This statement is in complete agreement with many of the comments made during the telephone interviews. It also prompts a very close reading of the survey responses. It is impossible, however, to factor in this possible "dishonesty" when analyzing survey responses. The results then should be viewed with this possibility in mind. There was also concern expressed that any confidential information would not be treated as such.

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[13] Another company said they would like "to get bid information without having to have an employee camp out at the various procurement offices."

[14] This example is paraphrased from personal documents sent to DSMC.

These concerns are not merely those of small businesses operating on slim margins. A large aerospace company made the following related statements.

> The funding gaps between government fiscal years makes it necessary to use company funds to maintain continuity by subcontractors and company operations. These result in a situation of uncertainty for our suppliers and extra cost to our company.... The requirement to give up technical data rights for new technology developments on follow-on contracts discourages companies from making the investment to make these developments. Retention of the technology advantage is necessary to encourage industry to stay in the business, and an opportunity to recover its investment.

A large military electronics firm described such policies as "not only a disincentive to contractors... but also detrimental to the U.S. economy since this places our industries at a major disadvantage in competing with foreign suppliers who are subsidized rather than taxed by their own governments."

The aerospace firm quoted above complained of the "failure by the government to communicate what they really want on a contract," with the result being extra work, delay in schedule, and cost to the company. Lengthy delays "place the contractor at risk of not following the customer's desire (by not doing what is wanted)."

The firms that remained in the defense market (82% of the entire survey) broke down as follows, reflecting the industry groups and the annual sales volume. This table reflects that fastener industry respondents were the only group not primarily involved with defense since only 48% were currently in the defense market. The 45 respondents not included in Table 13, who were not currently in the defense market, had either dropped out or had not succeeded in acquiring defense business; however, their views were an important part of the analysis.

TABLE 13 (199 **firms**)

Firms Currently in the Defense Market

(Survey question 1D)

			% of respondents from each industry
1.	Shipbuilding	16	94%
2.	Aerospace	26	96%
3.	Electronic	42	84%
4.	Eng Svcs	30	97%
5.	Fasteners	10	48%
6.	Manufacturing	50	75%
7.	Other/No Ans	25	81%
1.	Under $1M	5	
2.	$1M - $10M	41	
3.	Over $10M	144	
4.	No response	9	

As was the case in Tables 8 and 9, the same questions were asked of those firms who remained in the Defense market. The results were unsurprisingly similar.

TABLE 14 (199 **firms**)

Firms in the Defense Business:
Primary Administrative Burdens

(Survey question 1D and 3)

1.	Procurement policies	116	58%*
2.	Audit procedures	100	50%
3.	Bidding methods	81	41%
4.	Late payment	73	37%
5.	Government attitude	71	36%
6.	Defense specifications	59	30%

* % of those 199 firms in the defense business that listed these factors.

TABLE 15 (199 **firms**)

Firms in the Defense Business:
Primary Incentives to Stay

(Survey question 1D and 4)

1.	Procurement policies	111	56%*
2.	Government attitude	58	29%
3.	Bidding methods	33	17%
4.	Profitability	24	12%
5.	Defense specifications	24	12%

G. Firms that Do Not Want Defense Business

In contrast, the firms that do not want defense business broke down as follows.

TABLE 16

Firms that Do Not Want Defense Business
(Survey question 2A)

			% of respondents from each industry
1.	Shipbuilding	1	6%
2.	Aerospace	0	0
3.	Electronics	4	8%
4.	Eng Svcs	1	3%
5.	Fasteners	2	10%
6.	Manufacturing	4	6%
7.	Other/No Ans	6	19%

These same firms answered questions 3 and 4 as follows:

TABLE 17 (18 **firms**)

Firms that Do Not Want Defense Business:
Primary Administrative Burdens
(Survey question 2A and 3)

1.	Procurement policies	9	50%*
2.	Defense specifications	7	39%
3.	Government attitudes	5	28%
4.	Audit procedures	5	28%

* % of those 18 firms that do not want defense business that listed these factors.

(Accounting practices, bidding methods, and late payment tied with 3 firms for 17%.)

Primary Incentives to Remain
(Survey questions 2A and 4)

1.	Procurement policies	7	39%*
2.	Government attitudes	3	17%
3.	Defense specifications	3	17%
4.	Bidding methods	2	11%
5.	Late payment	2	11%

H. Firms that Intend to Remain in the Defense Market

Table 13 above reflected the 199 firms (or 82% of the respondents of the total survey) that are currently in the defense market (survey question 1D). The following table, however, shows the firms that intend to remain in the defense market at a similar or different level (survey question 2C). The largest segment of the survey population (187 firms or 77% of the total survey) answered question 2 with the intent to remain in the defense business. They are broken down below according to industry group and annual sales volume.

TABLE 18 (**187 firms**)

Firms Intending to Remain in DoD

(Survey question 2C)

			% of respondents from each industry
1.	Shipbuilding	14	82%
2.	Aerospace	25	93%
3.	Electronic	38	76%
4.	Engr Svcs	27	87%
5.	Fasteners	13	62%
6.	Manufacturing	28	42%
7.	Other/No Ans	24	77%
1.	Under $1M	4	
2.	$1M - $10M	39	
3.	Over $10M	137	
4.	No Response	7	

If the researcher were to operate upon this statistic alone, he could conclude that, with 77% of the total respondent population intending to remain in the defense market, the exodus from DoD business is certainly acceptable. However, a closer reading of the responses reveals a level of dissatisfaction that could be interpreted as a "time bomb." If pushed too far, many firms will leave and they are already at the end of their tether. This interpretation of the results is seen in the following tables and, most clearly, in the verbal responses given during the telephone interviews. It will be recalled that 41% of the respondents were willing to be contacted by telephone.

Those firms who intend to remain in DoD (again it was impossible to tell if it was by choice or necessity) answered questions 3 and 4 as follows.

TABLE 19 **(187 firms)**

Firms Intending to Remain in Defense Business: Administrative Burdens
(Survey question 2C and 3)

1.	Procurement policies	112	60%*
2.	Audit procedures	92	49%
3.	Bidding methods	74	40%
4.	Late payment	70	37%
5.	Government attitude	67	36%
6.	Defense specifications	55	29%

* % of those 187 firms that intend to remain in DoD that listed these factors.

Incentives to Remain
(2C and 4)

1.	Procurement policies	106	57%*
2.	Government attitudes	50	27%
3.	Bidding methods	29	16%
4.	Late payment	25	13%
5.	Defense specifications	23	12%
6.	Profitability	19	10%

I. Primary Administrative Burdens

It is instructive to analyze the answers to questions 3 and 4 more closely. Question 3 asked for the primary administrative burdens felt by each company in doing business with the Department of Defense. Question 4 sought the specific changes in procurement policies that would provide the biggest incentive for firms to enter, re-enter, and/or increase their role in the defense market. The following tables (20 through 25) display the six most frequently mentioned factors broken down by industry group and annual sales volume.

As noted previously in Table 9, the primary (most frequently mentioned) administrative burdens were:

1)	procurement policies	139	57%
2)	audit procedures	112	46%
3)	bidding methods	92	38%
4)	late payment	82	34%
5)	government attitudes	80	33%
6)	specifications	74	30%.

1. Procurement Policies

Procurement policies/paperwork/regulations were mentioned most frequently as the primary administrative burden as well as the greatest incentive to remain, and topped several other lists as well. It will be recalled that **inflexible procurement policies and burdensome paperwork** were ranked high in both the Lamm and the Schauber studies. Because this category for the current study included a variety of statutory and regulatory requirements as well as the catch-all of "paperwork" it was necessary to review specific answers on the questionnaires to analyze the issue further.

TABLE 20 **(139 firms, 57% of survey)**
Procurement Policies as Primary Administrative Burden
(Survey question 3J)

			% of respondents from each industry
1.	Shipbuilding	12	71%
2.	Aerospace	19	70%
3.	Electronic	28	56%
4.	Eng Svcs	18	58%
5.	Fasteners	9	43%
6.	Manufacturing	34	51%
7.	Other/No Ans	19	61%
1.	Under $1M	3	
2.	$1M - $10M	27	
3.	Over $10M	99	
4.	No Response	10	

This dominant administrative burden of **procurement policies/ paperwork/regulations** merits special attention, based both on the frequency with which it was mentioned by all groups and because it is a category comprised of myriad diverse issues. Other factors such as **audits, payments, etc.** are defined rather narrowly. However, because this question was open-ended, there were many specific policy and regulatory issues mentioned that were grouped for purposes of coding and analyzing the responses. The generic term **procurement policies/paperwork/regulations** does not indicate the specific issues that concerned respondent firms. In order to provide a basis for corrective action, it is necessary to focus on the policies and regulations that appeared most frequently in this category.[15]

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[15] Because the administrative burdens mentioned in question 3 paralleled the "fixes" listed question 4, this discussion focuses on the answers to both questions.

The most consistent comment in this policy/regulatory area concerned the complicated, shifting, and inconsistent interpretation of the procurement regulations. Respondents often noted that it was difficult to merely obtain answers to questions on policy and regulations, much less consistent ones. The regulations are described as "too cumbersome." Laws and regulations are "implemented without a thorough evaluation of impact, i.e., Drug Free Workplace, Procurement Ethics, and the Byrd Amendment." Indeed, the DoD Supplement to the Federal Acquisition Regulation is larger than the FAR itself, which was greatly reduced several years ago.

There is also much concern with the length of the procurement process. Respondents included examples such as problems with multiple Best and Final Offers (BAFOs) and the length of time from draft Request for Proposal (RFP) to eventual award. In fact, BAFOs were described as the means by which DoD made companies "prostitute themselves in order to drive the prices down."

The sheer quantity and complexity of reports and administrative paperwork necessary in doing business with the Department of Defense is considered excessive compared to commercial practices. One firm estimated that contract administration often constitutes 60% of the total contract value. Many firms gave examples of specific forms or reams of paperwork required. In fact, respondents recommended repeatedly that DoD adopt "commercial practices."

One company drew the distinction between their commercial invoices and those submitted for DoD. "The factor for determining payment [for commercial work] is SATISFACTORY COMPLETION OF THE WORK CONTRACTED, NOT CORRECT COMPLETION OF THE INVOICE FORM!" [emphasis in the original] However, with the Department of Defense

> ...we gave up on reason and sought help from our local DCASMA office, which has access to the computer database. They have been very helpful in explaining the system. Before we submit any DD 250s for signature now, we make certain that whatever we type on the DD 250 matches what is in the computer exactly - whether the information corresponds to reality or not. [emphasis in the original]

Several other procurement issues that were mentioned are linked to other factors that firms listed for questions 3 and 4. The use of multiyear contracts to support program stability and investment decision making were listed repeatedly by respondents. In addition, companies want a shift in risk by the elimination of fixed price development contracts. Also tied to these issues is a repeated request for better recovery opportunities for Independent Research and Development (IR&D) and Bid and Proposal (B&P) costs.

The issues listed above represent the most common complaints in the area of policy and regulatory change. Although several of these issues involve significant political change, many have been mentioned by almost every high- level commission that has reviewed the procurement process.

2. Audit Procedures

The second most frequently mentioned administrative burden was **audit procedures**, listed by 46% of the total survey respondents. (see Section III C 1)

NOTE: Tables 21-25 specify the number of respondents from each industry which noted that particular issue was a burden, whether it was administrative or otherwise.

Industry discussions later in the report highlight the issues reflected in this data.

TABLE 21 (112 firms, 46% of survey)
Audit procedures as Primary Administrative Burden
(Survey question 3G)

			% of respondents from each industry
1.	Shipbuilding	9	53%
2.	Aerospace	17	63%
3.	Electronic	24	48%
4.	Eng Svcs	16	52%
5.	Fasteners	4	19%
6.	Manufacturing	29	43%
7.	Other/No Ans	13	42%
1.	Under $1M	1	
2.	$1M - $10M	14	
3.	Over $10M	92	
4.	No Response	5	

3. Government Bidding Methods

Government bidding methods constituted the third most frequently mentioned administrative burden. (see Section III I 1)

TABLE 22 **(92 firms, 38% of survey)**

Bidding Methods as Primary Administrative Burden

(Survey question 3D)

			% of respondents from each industry
1.	Shipbuilding	2	12%
2.	Aerospace	9	33%
3.	Electronic	17	34%
4.	Eng Svcs	14	45%
5.	Fasteners	10	48%
6.	Manufacturing	27	40%
7.	Other/No Ans	13	42%
1.	Under $1M	5	
2.	$1M - $10M	28	
3.	Over $10M	55	
4.	No Response	4	

4. Late Payment/Nonpayment

Late payment/nonpayment was the fourth most frequently mentioned administrative burden. (see Section III F 2)

TABLE 23 **(82 firms, 34% of survey)**

Late Payment as Primary Administrative Burden

(Survey question 3A)

			% of respondents from each industry
1.	Shipbuilding	10	59%
2.	Aerospace	8	30%
3.	Electronic	15	30%
4.	Eng Svcs	12	39%
5.	Fasteners	8	38%
6.	Manufacturing	20	30%
7.	Other/No Ans	9	29%
1.	Under $1M	0	
2.	$1M - $10M	23	
3.	Over $10M	57	
4.	No Response	2	

5. Government Attitudes/Competence

Government attitude/competence was the fifth most frequently mentioned administrative burden. All industries across the board considered this factor a problem. (see Section III C 1)

TABLE 24 (80 firms, 33% of survey)
Government Attitudes as Primary Administrative Burden
(Survey question 3K)

			% of respondents from each industry
1.	Shipbuilding	7	41%
2.	Aerospace	10	37%
3.	Electronic	20	40%
4.	Eng Svcs	8	26%
5.	Fasteners	5	24%
6.	Manufacturing	19	28%
7.	Other/No Ans	11	36%
1.	Under $1M	1	
2.	$1M - $10M	14	
3.	Over $10M	59	
4.	No Response	6	

6. Defense Quality Specifications

Defense quality specifications came in as the sixth most frequently mentioned administrative burden.

TABLE 25 (74 firms, 30% of survey)
Defense Quality Specifications as Primary Administrative Burden
(Survey question 3F)

			% of respondents from each industry
1.	Shipbuilding	5	29%
2.	Aerospace	8	30%
3.	Electronic	12	24%
4.	Eng Svcs	2	7%
5.	Fasteners	8	38%
6.	Manufacturing	28	42%
7.	Other/No Ans	11	36%

1.	Under $1M	2
2.	$1M - $10M	13
3.	Over $10M	56
4.	No Response	3

J. Greatest Incentives to Remain in the Defense Business

One firm answered question 4 by stating that "the whole system is hopeless -- needs to be changed completely." Another company described doing business with DOD as "gruesome." That same firm went on to say that "When the system is so cumbersome that those responsible for creating it cannot comply (i.e., DCAA is 5 years behind and simple contracts take up to 2 years to issue), one must question whether an amputation is the only way to save the patient."

Despite such not so singular pessimism, many firms did attempt to give constructive answers. It is interesting to contrast the above responses for administrative burdens with those for incentives to remain in the defense market. Although the differences are not major, their interpretation is significant.

The six most frequently mentioned changes were (as seen above in Table 10):

1)	procurement policies,	131	54%
2)	government attitude,	71	29%
3)	bidding methods,	38	16%
4)	late payment,	29	12%
5)	defense specifications, and	28	11%
6)	profitability.	27	11%

1. Procurement Policies

Not surprisingly, **procurement policies** were mentioned most frequently as the changes most likely to induce firms to remain in the DoD market. This population consisted of 131 firms, or 54% of the total survey. The following tables show them broken down by industry group and by sales volume.

TABLE 26 (131 firms)

Change in Procurement Policies as Incentive to Stay

(Survey question 4A)

			% of respondents from each industry
1.	Shipbuilding	8	47%
2.	Aerospace	17	63%
3.	Electronic	28	56%
4.	Eng Svcs	19	61%
5.	Fasteners	8	38%
6.	Manufacturing	40	60%
7.	Other/No Ans	11	36%
1.	Under $1M	3	
2.	$1M - $10M	30	
3.	Over $10M	93	
4.	No Response	5	

2. Government Attitudes/Competence

The second most frequently mentioned factor was a change in the attitude and level of competence of most government employees. As seen above in Table 9, the second most frequently mentioned administrative burden was audit procedures. As mentioned earlier, it appears (especially from telephone interviews) that if the attitude of the auditors and/or contracting officers was different, the factor itself, such as auditing or procurement policies, might not be quite so important.

TABLE 27 (71 firms)

Change in Government Attitude as Incentive to Stay

(Survey question 4K)

			% of respondents from each industry
1.	Shipbuilding	5	29%
2.	Aerospace	9	33%
3.	Electronic	12	24%
4.	Eng Svcs	11	36%
5.	Fasteners	6	29%
6.	Manufacturing	19	28%
7.	Other/No Ans	9	29%
1.	Under $1M	1	
2.	$1M - $10M	16	
3.	Over $10M	51	
4.	No Response	3	

Industry responses were most impassioned when discussing this factor for dissatisfaction. This applies in both the "macro" and the "micro" sense. Respondents often mentioned broad government attitudes, such as that "all contractors are seen as criminals," as well as descriptions of DCAA auditors (a particular oft-mentioned example) as incompetent and the tongue-in-cheek "'Navy Publications' personnel are hired based how rude and indignant they can be."

Personal interviews and supplemental statements revealed another dimension to the problem. As stated above quite eloquently by the company currently liquidating its assets, many of those interviewed admitted that survey answers were apt to be less than candid.

There exists a strong fear of "retaliation" (though unspecified) on the part of the government toward those who express dissatisfaction. One company stated that "local government representatives may interpret requirements that are not formally written into the contract and the company is obliged to comply to preserve a functioning relationship, often as extra cost and effort." Another spoke of the "problem in the technical evaluation, where requirements and evaluation rules are changed on the fly. Incomplete and incorrect evaluations are rife."

This opinion was echoed in a response by an anonymous shipyard, an industry which has one customer: the Department of Defense.

> Government quality organization tends to be autocratic in dealing with contractors and reject work based upon limited knowledge of the contract or industrial process.... Each government contract staff sets its own rules quite independently of a contract staff in another contractor's facility, i.e., the same specifications are being administered and interpreted differently in different yards.

Another shipyard, also trapped in a monopsony, went so far as to call government practices "extortion."

> Funds are withheld by DCAA for excessive periods (as long as 1-3 years) because they are not dealt with in a timely manner by Contracting Officers. This is so because of the fear and power of DCAA. The arbitrary basis often used to withhold funds makes it more difficult for Contracting Officers to resolve the issue. The DCAA now virtually controls the contracting process.

3. Government Bidding Methods

Government bidding methods constituted the third most frequently mentioned change that would be an incentive to stay in the defense market. This was the same for primary administrative burdens.

> Another of our favorites among annoying DOD Bidding Procedures is the requirement to send the completed proposal to an address or code that cannot be reached by an overnight mail service (all of whom require a street address, building and room number, and telephone number of the person receiving the overnight package). I have worked in the Defense Industry for nearly 40 years and have been associated with hundreds of proposals to DOD agencies; I recall very few that were not hand carried or sent express mail. Yet DOD letterhead is infamous for including no phone numbers, no building addresses, no telefax numbers. In practice, one would begin to suspect that nearly everything possible is done to discourage contractor correspondence.

TABLE 28 (38 firms)

Bidding Methods as Incentive to Stay

(Survey question 4D)

			% of respondents from each industry
1.	Shipbuilding	3	18%
2.	Aerospace	4	15%
3.	Electronic	4	8%
4.	Eng Svcs	9	29%
5.	Fasteners	1	5%
6.	Manufacturing	11	52%
7.	Other/No Ans	12	39%
1.	Under $1M	1	
2.	$1M - $10M	14	
3.	Over $10M	21	
4.	No Response	2	

4. Late Payment/Nonpayment

Late payment or **nonpayment** was the fourth most frequently mentioned category of changes that would provide the greatest incentive to stay.

TABLE 29 (29 **firms**)

Changes in Payment as Incentive to Stay

(Survey question 4A)

			% of respondents from each industry
1.	Shipbuilding	4	24%
2.	Aerospace	5	19%
3.	Electronic	6	12%
4.	Eng Svcs	4	13%
5.	Fasteners	1	5%
6.	Manufacturing	5	7%
7.	Other/No Ans	4	13%
1.	Under $1M	0	
2.	$1M - $10M	8	
3.	Over $10M	20	
4.	No Response	1	

5. Defense Quality Specifications

Defense quality specifications caused a great deal of concern to defense contractors. It was mentioned fifth most frequently as a change in procurement to provide the greatest incentive to remain in the defense market.

TABLE 30 (28 **firms**)

Change in Specifications as Incentive to Remain

(Survey question 4F)

			% of respondents from each industry
1.	Shipbuilding	2	12%
2.	Aerospace	0	0
3.	Electronic	9	18%
4.	Eng Svcs	0	0
5.	Fasteners	1	5%
6.	Manufacturing	12	18%
7.	Other/No Ans	4	13%
1.	Under $1M	0	
2.	$1M - $10M	5	
3.	Over $10M	21	
4.	No Response	2	

6. Profitability

Appearing sixth on the list of changes in procurement more favored by defense contractors was the issue of profitability. Although for purposes of this study, the following figures stand on their own, statements made during the interviews and in supplemental statements gave the impression that profitability was more important than the figures showed. (see Section III F 1)

TABLE 31 (27 firms)

Change in Profit Policy as Incentive to Stay

(Survey question 4H)

			% of respondents from each industry
1.	Shipbuilding	1	6%
2.	Aerospace	6	22%
3.	Electronic	6	12%
4.	Eng Svcs	6	19%
5.	Fasteners	1	5%
6.	Manufacturing	4	6%
7.	Other/No Ans	3	10%
1.	Under $1M	0	
2.	$1M - $10M	5	
3.	Over $10M	21	
4.	No Response	1	

K. The View From Each Industry

It is also interesting to compare how the different industry groups answered the questions on administrative burdens and incentives to remain.

1. Shipbuilding Industry

NOTE: **Procurement policy** includes both legal and regulatory issues.

TABLE 32 (**17 firms, 7% of survey**)

The Shipbuilding Industry:
Primary Administrative Burdens
(Survey question 3)

			% of shipyards
1.	procurement policy	12	71%
2.	late payment	10	59%
3.	audit procedures	9	53%
4.	government attitudes	7	41%
5.	specifications	5	29%
6.	accounting practices	2	12%
	Incentives to Remain		
1.	procurement policy	8	47%
2.	government attitudes	5	29%
3.	late payment	4	24%
4.	bidding methods	3	18%

The position of the shipbuilding industry within the industrial base is unique. Since the government is its only customer, fears are perhaps expressed most succinctly by these firms. Shipyard responses were significantly higher than the other five industries with **24%** of the yards expressing a desire to leave the market. Of the top six administrative burdens, shipbuilding expressed the least concern with **bidding methods** (**12%**) but the most concern with **late payment** (59%). Although procurement policy was a higher concern, **late payment**, was noted much more often with shipbuilders than with other industries. Only **6%** mentioned **profit policy** as an incentive to stay.

Surprisingly, however (despite the absence of a commercial alternative), shipbuilders were not the highest percentage of those intending to remain in the defense market. Aerospace was highest at **93%** and shipbuilding was third at **82%**.

One yard that has not survived responded to the DSMC survey. In response to question 3, the reply was the following:

> Obstructionist attitudes -- "How many reasons can we find not to approve an invoice?" Slow to non-existent efforts to complete audits of jobs, thereby holding up final contract close out. Efforts on government part to force contractors to undertake front-end development risks on fixed price basis. A monopsonistic buyer exerting what would be termed unfair trade practices, at the least, and probably a violation of most of the rules and regulations of the FTC and the antitrust department of the Justice Department. In an industry that has no other customer to turn to, and is in fact dying at an increasing rate, [the government] imposes innumerable burdens, administrative and otherwise on any firm doing business with the government in this industry.

The answer that this same yard gave to question 4 is the most revealing. "There are no conditions under which I would again undertake a major contract with the U.S. government."

2. Aerospace Industry

TABLE 33 (27 firms, 11% of survey)
The Aerospace Industry:
Primary Administrative Burdens

			% of aerospace industry
1.	procurement policies	19	70%
2.	audit procedures	17	63%
3.	government attitudes	10	37%
4.	bidding methods	9	33%
5.	technical data rights	9	33%
6.	instability of market	8	30%

(Tying at 30% with instability of market were late payment and defense quality specifications.)

Incentives to Remain

1.	procurement policies	17	63%
2.	government attitude	9	33%
3.	instability of market	7	26%
4.	investment/capitalization	7	26%
5.	profitability	6	22%
6.	late payment	5	19%

Here within the aerospace industry is the first time throughout the survey that several factors have risen to the top six. The first to stand out is the issue of the **instability of the government market**. This factor is even more significant given the industry. That **instability of market** was marked by approximately **30%** of those firms as both primary administrative burden and incentive to remain in the business demonstrates a level of insecurity within the defense sector that has not been felt for over a decade.

Two other factors that appear here for the first time are **technical data rights** and **investment/capitalization**. For this industry, these two issues are linked. Not only do they feel that they are not getting the deserved return on investment (**profitability** was ranked #5). Respondents stated that they are not being given credit for the technology advances they are making.

3. Electronics Industry

TABLE 34 (**50 firms, 20% of survey**)

The Electronics Industry:

Primary Administrative Burdens

			% of electronics industry
1.	procurement policies	28	56%
2.	audit procedures	24	48%
3.	government attitudes	20	40%
4.	bidding methods	17	34%
5.	late payment	15	30%
6.	specifications	12	24%
	Incentives to Remain		
1.	procurement policies	28	56%
2.	government attitude	12	24%
3.	specifications	9	18%
4.	profitability	6	12%
5.	late payment	6	12%
6.	investment/capitalization	6	12%

The electronics industry was distinctive for remaining in the middle percentage of almost all responses. The only exception was on **bidding methods** as an incentive to stay. Only **8%** of this industry mentioned it as opposed to 52% for manufacturing. The strongest concern within electronics was with **procurement policies**, both as administrative burdens and incentives to stay.

4. Engineering Services/Software

TABLE 35 (**31 firms, 13% of survey**)

The Engineering Services/Software Industry:
Primary Administrative Burdens

			% of engr svcs industry
1.	procurement policies	18	58%
2.	audit procedures	16	52%
3.	bidding methods	14	45%
4.	late payment	12	39%
5.	government attitude	8	26%
6.	profitability	4	13%
	Incentives to Remain		
1.	procurement policies	19	61%
2.	government attitudes	11	35%
3.	bidding methods	9	29%
4.	profitability	6	19%
5.	quality vs. cost	4	13%
6.	late payment	4	13%

Engineering services/software also fell in the mid-range on their responses with some exceptions. A full 87% (second highest) intended to remain in the defense market. On the other end of the spectrum, only 7% were concerned with specifications.

Yet, this is the first time in the survey that quality vs. cost has risen to the top six. The attitude about this issue was clearly put by several firms and related to the entire area of competition. Basically, the feeling of the industries is that the Department of Defense is more concerned with the price rather than the quality of the product. "The impact is that companies do not feel they have a level, timely, complete, and fair evaluation of their proposals, and ultimately don't want to be bothered." This company further offered this example.

> On a competitive FFP bid (approximately $50M), Company A failed to include shipping the product to the government sites; Company B did, and lost because of the higher price. The shipping was in excess of $3.5M; and Company B's price was less than that amount higher than A's; A was awarded the contract. The government later had to terminate A's contract.

5. Industrial Fasteners Industry

TABLE 36 (21 firms, 9% of survey)

The Industrial Fastener Industry:
Primary Administrative Burdens

			% of fastener industry
1.	bidding methods	10	48%
2.	procurement policies	9	43%
3.	specifications	8	38%
4.	late payment	8	38%
5.	government attitude	5	24%
6.	inspection requirements	4	19%
	Incentives to Remain		
1.	procurement policies	8	38%
2.	government attitudes	6	29%
3.	all others (mixed)	5	24%
4.	inspection requirements	2	10%

The industrial fastener industry is a special case. Only one respondent intended to diminish their role or leave the defense market. Among the administrative burdens identified by the six industry groups, the fastener firms were often on the low end of concern. They were the lowest and/or significantly below the average for procurement policies, audits, and government attitudes as burdens. Based on their prioritization of burdens, their responses indicated concern not so much for administrative issues such as policies, regulations, audits, etc. but rather for the way DoD approaches the procurement of fastener products.

Yet this response of apparent satisfaction with DoD is tempered by some major concerns. A number of respondents described severe problems with competition from less expensive, sometimes fraudulent, foreign fastener products. Some survey respondents felt that the influx of defective fasteners from foreign suppliers has not only cast a shadow on fastener producers, but may change the methods by which DoD procures necessary items. This may prove costly and detrimental to U.S. producers.

6. **Manufacturing Industry**

TABLE 37 (**67 firms, 27% of survey**)

The Manufacturing Industry:
Primary Administrative Burdens

			% of manufacturers
1.	procurement policies	34	51%
2.	audit procedures	29	43%
3.	specifications	28	42%
4.	bidding methods	27	40%
5.	late payment	20	30%
6.	government attitudes	19	28%
7.	accounting practices	16	24%
	Incentives to Remain		
1.	procurement policies	40	60%
2.	government attitudes	19	28%
3.	specifications	12	18%
4.	bidding methods	11	16%

The manufacturing industry had the lowest percentage of respondents who intended to remain in DoD (**42%**). Manufacturers have the option of stepping up their commercial business (unlike the shipyards and many of the aerospace firms). Their biggest concerns rest with procurement policies, both as an administrative burden and an incentive to stay.

L. OBSERVATIONS

One of the purposes of this effort is to determine whether there is an unacceptable exodus of firms from the defense industrial base. Although it is impossible to determine at this juncture the precise level that is considered "unacceptable," it is certainly significant that **52** firms, a full **21%** of the entire survey, indicated that they either do not want, or intend to diminish or leave defense business. Given also the much-emphasized point concerning lack of candor on the part of the respondents, it is likely that this figure is actually higher.

This figure is a combination of **34** firms that intend to diminish or leave the defense market (Table 7) and **18** firms that do not want defense business (Table 16). It is important to review the factors that these firms listed in describing their primary administrative burdens and the greatest incentives to remain in the defense market.

Of the **34** firms that intend to diminish or leave DoD, **audit procedures, procurement policies,** and **government attitude** were listed as the top three primary burdens. However, **procurement policies, government attitude,** and **profitability** were the top three incentives for these firms to remain in the defense market. Of the **18** firms that do not want defense business, **procurement policies, defense specifications,** and **government attitudes** were the top three factors mentioned as both primary administrative burdens and greatest incentives to remain. Consonant with these responses are the factors listed by the entire body of survey respondents as primary administrative burdens and greatest incentives to remain. There was little difference in the reasons for dissatisfaction.

Based upon this analysis, then, the first priority of the Defense Department in healing relations with industry should be to address the concerns that are driving private industry from the defense market and making those that remain in the market greatly dissatisfied. The most important factors, whether mentioned as administrative burdens or as incentives to stay in the defense market are the following:

1) procurement policies,
2) audit procedures,
3) bidding methods,
4) late payment,
5) government attitude/competence,
6) DoD specifications, and
7) profitability.

There were several other factors that were mentioned repeatedly, in both written responses and (especially) in the personal interviews. The first is the "disproportionate time demands placed upon senior management of firms conducting a portion of their business in the defense arena." Exacerbating the problem further is that this required amount of senior management attention is inversely proportional to the amount of profit earned. This factor hits the smaller businesses especially hard. "There is something fundamentally wrong about a system that requires a contractor to assign its best people to proofread invoices instead of technical reports."

Two additional factors involve a broader cut at disenchantment with the profit potential in defense business, and also concerns the bad press many companies have received. If an "ill wind" blows toward a company, the media and then the public at large are immediately aware of wrongdoing.

Seldom is the entire story publicized. For example, defense specifications plays a starring role in stories about $700 coffee pots, but the public hears little of such background information.

That same ill wind then fans flames that engulf the commercial sector of a company (if it is fortunate enough to have one) and, of course, its good reputation. Nor does the reason for the hysteria have to be of giant proportions. The CEO of a Fortune 500 company put it thusly: "If one SOB fills out a time card improperly, the company's name is spread all over the front page and the public often believes that we're a bunch of crooks filling our personal pockets."

Another factor involves a strong feeling of inefficacy on the part of the majority of respondents, again, both in the written surveys and the personal interviews. This problem is, of course, linked to the issue of **government attitude** and the level of **competence** of many government employees. Even in the small set of respondents who wanted to enter the defense market, the major complaint was lack of information on specific contracts or details of how to bid.

Indeed, many of those interviewed expressed more than mild surprise that a former Assistant Secretary of Defense was calling them -- and actually listening! However, such pleasant shock was soon followed by the lack of any feeling of confidence that it would make any difference.

There is a universal feeling among the industries that there is no high-level acquisition executive within the Department of Defense that has the authority to handle the problems that exist. According to the "Defense Management Report to the President," submitted by the Secretary of Defense on June 12, 1989, the Office of the Under Secretary of Defense for Acquisition (USD/A) has authority that extends "to directing the Secretaries of the Military Departments on the manner in which acquisition responsibilities are executed by their Departments."[16]

This same report admitted that efforts within DoD to implement the recommendations of the Packard Commission "have not produced the tangible results envisioned by the Commission. This is indicative of the dimension of the problems the Commission identified, the far-reaching solutions it offered, and the persistence required if DoD's management of major acquisition programs is to emulate the characteristics of the most successful commercial and government projects."[17]

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[16] Dick Cheney, Secretary of Defense, "Defense Management Report the President," July 1989, p. 3.

[17] Ibid, p.7,8.

Many respondents to the DSMC study mentioned the Packard Commission by name and simply suggested implementing those recommendations. The characteristics of successful projects outlined by the Commission were:

1. clear command channels,
2. program stability,
3. limited reporting requirements,
4. small, high quality staffs,
5. communications with users, and
6. better system development.[18]

To echo the "Defense Management Report to the President," it is clear that the recommendations of the Commission "intended to make fundamental changes in the defense acquisition system than have yet been accomplished." It is also conceivable that some of the problems are, at this juncture, politically insurmountable.

One of the most important aspects of this effort is the knowledge gained about the specific industries that responded to the questionnaire. To formulate corrective action, it is essential that policymakers consider the unique qualities of each industry and each tier of the defense industrial base.

The position of the **shipbuilding** industry is unique. Trapped in a monopsony, the shipyards **want out** of the defense market more than any other industry. Statements from the individual yards were perhaps the harshest of those received. Yet, those same yards had few problems with DoD's **profit policy**, but merely wanted timely **payment** for the work performed.

More than any other industry, the **aerospace** firms **intended to remain** in the defense business. Their concerns with **procurement policies** and **auditing procedures** were double the level of concern with other burdens.

The responses of the **electronics** industry followed the same patterns of the other industries. More than any other issue, changes in **procurement policies** would give electronics firms the incentive to remain in the defense market.

Like the electronics industry, companies in what was termed the **engineering services/software** industry also followed the scheme of the responses of the other industries. However, this industry included the issue of **quality versus cost** in the top six of their greatest incentives to remain. Many companies in other industries had mentioned it as well.

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[18] _Ibid_ , p.8.

The **industrial fasteners** industry appeared least dissatisfied, as evidenced by the number of administrative burdens and incentives to remain that firms mentioned. Clearly, the biggest problem within this industry revolved around the influx of defective fasteners from foreign suppliers.

The **manufacturing** industry had the lowest percentage of respondents who intended to remain in the defense market. This group is the most loosely defined (within this study) and is perhaps most able to switch to the commercial market if necessary.

It is clear that data from this survey support the hypothesis that there exists a disjunct between government and industry. Unfortunately, good will, trust, and cooperation among groups with shared interests cannot be created by statute.

For example, resentment toward GAO auditors in the shipyards, dates back (at least) to World War II. There currently exists an extreme polarization of views. The private sector wants stronger incentives from government for maintaining the industrial base for national security. The government wants an indication from private industry that they are willing to share the financial burden. What remains is an adversarial relationship between the Navy and private shipbuilders. As far back as 1974, relations had deteriorated such that, after extensive hearings, Congress ordered the Navy to act toward improving the situation.[19]

> Industry and the Navy do not completely agree on the causes of their collective problems. Each side tends to defense its own position and at the same time attack the other side. The fundamental problem is not the ongoing routine contract administration problems associated with quality assurance, constructive changes, late and defective government-furnished information and equipment, or inadequate specifications. Nor is it unpredicted escalation or changing requirements during the construction period.... The root cause of the current "adversarial relationship" is a revolution by the shipbuilders and their conglomerate owners against stifling control and bureaucratic decision-making exercised through governmental regulations and multilayered management.[20]

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[19] Paula J. Pettavino, "Prospects for Shipyard Mobilization: The Shipbuilding Industry and the U.S. Navy in Peace and War," Naval Engineers Journal, January 1989, pp. 60-63.

[20] Captain Brady M. Cole, USN, Procurement of Naval Ships, National Security Affairs Monograph Series 70-5, September 1979, National Defense University, pp. 35, 36.

The uncomfortable position of the Department of Defense in this dispute has been acknowledged in "Bolstering Defense Industrial Competitiveness" published in July 1988 by the Under Secretary of Defense for Acquisition.

> This Department of Defense report is designed to provide both a strategy and specific initiatives to address this concern. Integral to this strategy is a recognition that the Department's influence is, at the same time, **significant and limited**. The strategy suggests exploiting the Department's leadership and leverage potential to strengthen the industrial base, but not to the exclusion of other Departmental priorities such as a well-equipped force structure. On the other hand, **it is neither possible nor desirable for the Department to solve all the ills of the commercial manufacturing sector**. [emphasis added][21]

Although that same report then states that "the cornerstone of this effort is cooperation with domestic industry," it appears from the current data that few recent efforts at "reconciliation" initiated by the Department of Defense have trickled down to (at least) many of the firms that responded to the DSMC survey.

Many reasons have been given by respondents to the survey for the exodus of firms from the defense business. These have been discussed at length above. However, based upon the survey responses, the supplemental documents provided by respondents, and personal interviews, the following two reasons seem to capture the heart of the problem: **government attitude** and **profit**.

The Chairman and CEO of a large aerospace firm offered this opinion.

> But even the terms and conditions issue is not the predominant one driving firms from the defense industry. By far the paramount problem is what I might refer to as the "business environment" -- the presumption that all those who conduct business with the Department of Defense are fundamentally dishonest. That is not to say that there have not been those who have made mistakes and indeed those who have even intentionally broken laws, but the media, with some support from the Department of Defense, has somehow succeeded in branding the million people in the defense industry as embracing ethical standards below those practiced elsewhere in American industry. This I believe is what deters young people today from joining

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[21] Robert B. Costello, op.cit., p. vii.

the defense industry and what drives out individuals and firms who are currently in the defense industry.

Doing business in what amounts to a punitive environment is distasteful for all concerned. One anonymous respondent probably spoke for the majority of defense contractors.

> Despite all of the rules, regulations, administrative problems, etc., companies would be in the business if the profits were there. In recent times, DoD has so cut back the profit potential, that the incentive is no longer there.
>
> The fix is simple; allow higher profits. Let the profit potential go up until you get the number of companies in competition that you want. Then, you won't even have to fix the problems discussed in answer to question 3.

The last word is left to the president of a small research and development firm.

> Does the DOD act in the best interest of the security of the nation, including its economic stability by creating complexity where none is needed? Are the stringent, ill-defined often primitive and highly expensive policies and requirements a positive or a negative force in ensuring the best buy for the taxpayer's dollar - to say nothing of the quality of the defense the taxpayer is buying.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

1. A significant portion of respondent firms want to reduce the level of involvement with the Department of Defense. Of the 199 firms currently doing business with DoD, thirty-four companies intend to diminish or leave the defense market. This exodus is a direct result of the administrative burdens inherent in dealing with the Department of Defense.

2. Of those firms who intend to remain in the defense market (the vast majority according to the data), there exists a highly significant level of dissatisfaction (again as a result of administrative burdens) that could encourage these firms to reduce their level of involvement in the defense market.

3. The perceived administrative burdens rated as most severe reflect subject areas capable of attack through leadership and policy change within existing Departmental authority.

4. The actions of the Department, initiated as a result of the Defense Management Report (DMR), will address the areas of concern reflected in this report, if continued with serious and intelligent intent.

5. Without serious action to implement the DMR on a long-term basis, the decline of the defense industrial base may reach an unacceptable and irreversible rate. This possibility requires further study.

B. Recommendations

1. Continue high-level emphasis upon the recommendations within the DMR. The conclusions drawn from the data in this study can be fully addressed within these ongoing efforts. Convene a series of workshops with leaders of industry and the Office of the Under Secretary of Defense for Acquisition to grapple with the problems highlighted by the study data.

2. Recommend an introspective analysis by the Office of the Under Secretary of Defense for Acquisition be conducted. This analysis is recommended in order to utilize the significant leverage of this organization which contains the leaders and policy makers of the acquisition community within the Office of the Secretary of Defense. Where they lead, the rest of the acquisition world will follow.

APPENDIX A

February 21, 1990

The Department of Defense (DoD) has initiated a special research project to analyze the reasons why firms either do not enter or discontinue business with the DoD. Based upon this analysis, we plan to implement corrective action on key issues. As we enter a period of constrained defense spending, it is essential to ensure that doing business with DoD is attractive.

My recent tenure as the Assistant Secretary of Defense for Production and Logistics gave me a thorough appreciation for the contributions of firms such as yours. We have developed a brief survey that we hope will reveal the most compelling issues you face as a past, current, or potential DoD contractor. The survey has been sent to a cross-section of commercial firms, large and small, who could conduct business with the DoD. Although large multibillion dollar companies are often the most visible suppliers to the DoD and will always remain important contributors to the defense of our nation, we are ever-mindful of the key role of each tier of the subcontractor base.

You will notice that the survey design allows your company to remain anonymous. It is most important that your response be as specific as possible to facilitate corrective action. I am confident that the key issues in your responses will help us understand your needs. In order to allow adequate time for analysis, I request that you return the survey by March 14. A copy of the report will be mailed to all those who request one.

May I encourage you to take the option of discussing your views with me by calling (703) 664-3385 or 664-2289. If you prefer this approach, I will attempt to speak with you personally. Thank you for your assistance and cooperation.

Sincerely,

Jack Katzen
Special Assistant to the
Undersecretary of Defense
for Acquisition

DEFENSE PROCUREMENT "PAPERWORK BURDENS" STUDY: WHY FIRMS ARE LEAVING THE INDUSTRIAL BASE

Survey

This questionnaire is part of a three-month study. It will determine whether there is an exodus of firms from the Defense sector and/or a marked reluctance on the part of corporations to enter the defense business as a result of the "paperwork burdens" imposed by the Department of Defense. The results of this study will be used to institute corrective action.

The following questions can be answered anonymously. However, if you prefer to discuss these issues, please provide your name and phone number. ______________________________

I. Industrial Attitudes toward the Defense Market

1. What is your experience in Defense business?

		Prime	Sub
A.	We have never attempted to enter the Defense market	( )	( )
B.	We have unsuccessfully attempted to enter the Defense market	( )	( )
C.	We no longer conduct business with the Dept. of Defense (since 19__)	( )	( )
D.	We are currently in the Defense market	( )	( )
E.	We have reduced our involvement in the Defense market (beginning in 19__)	( )	( )

2. What is your attitude toward obtaining Defense business?

		Prime	Sub
A.	We do not want Defense business	( )	( )
B.	We are in Defense business but intend to diminish our role or leave the market (as of 19__)	( )	( )
C.	We are in the Defense business and intend to remain	( )	( )
D.	We are interested in entering the Defense market	( )	( )

3. What are the primary administrative burdens that you have experienced in doing business with the Dept. of Defense? For example, payment, bidding, accounting or auditing procedures, technical data rights, specifications, etc. (Please rank these in order of importance. Specific examples would be most helpful.)

4. What change(s) in Defense procurement would provide the biggest incentive for you to enter, re-enter and/or increase your role in Defense business?

____

____

____

____

5. Do you produce the same or similar product(s) for the commercial and defense markets? Yes ( ) No ( )

If yes,

A. What percent is the defense market? _____%

B. Are they produced in the same facilities? Yes( ) No( )

If not, why not? ______________________________

II. Company Classification

In order to analyze the above answers within the context of the entire industrial base, it is necessary to obtain the following details about your firm.

1. Classification of your company

A. Your product or service?	B. SIC code (if known)	C. Approx. # employees
________	________	________

2. Please provide the breakout of your total business.

Prime Contractor	Subcontractor	Commercial	Other
____%	____%	____%	____%

3. What is your current annual sales volume?
   - A. Under $1M ( )
   - B. $1M - $10M ( )
   - C. Over $10M ( )

Thank you for your assistance. Copies of the results of this survey will be available. All company information will remain anonymous. The purpose of this survey is to enable the Department of Defense to institute corrective action.

Please return this survey to:

Defense Systems Management College
ATTN: DRI (Lt. Col. Dave Scibetta, USA)
Fort Belvoir, VA 22060

APPENDIX B

RESPONDENT POPULATION ACCORDING TO INDUSTRY

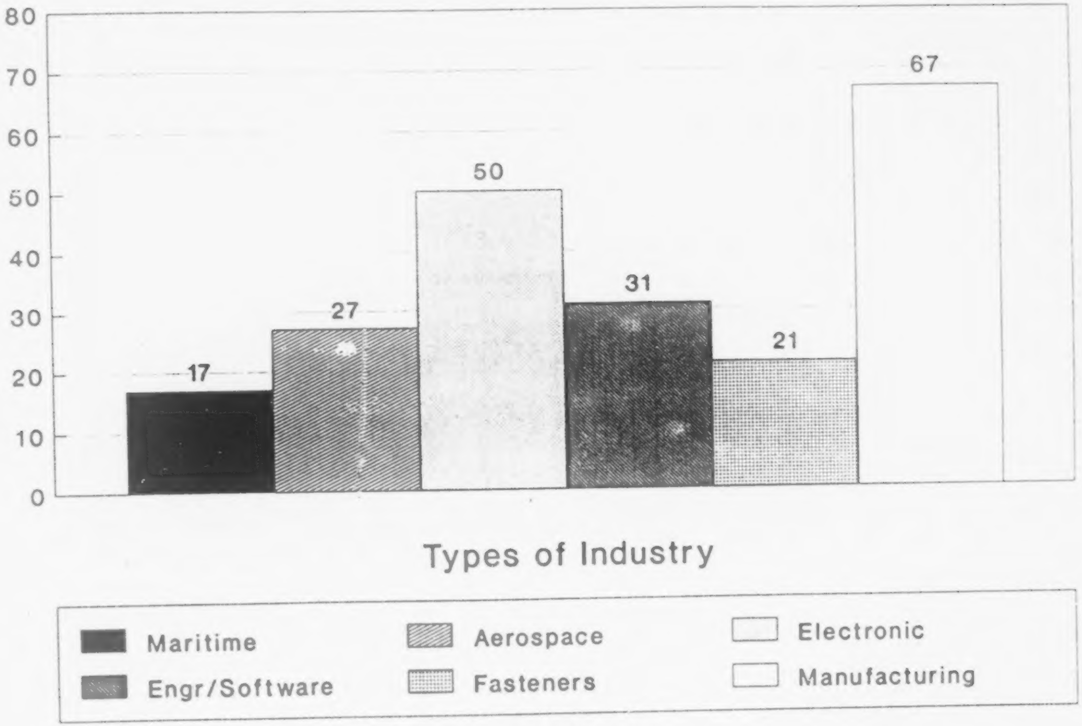

TABLE 1

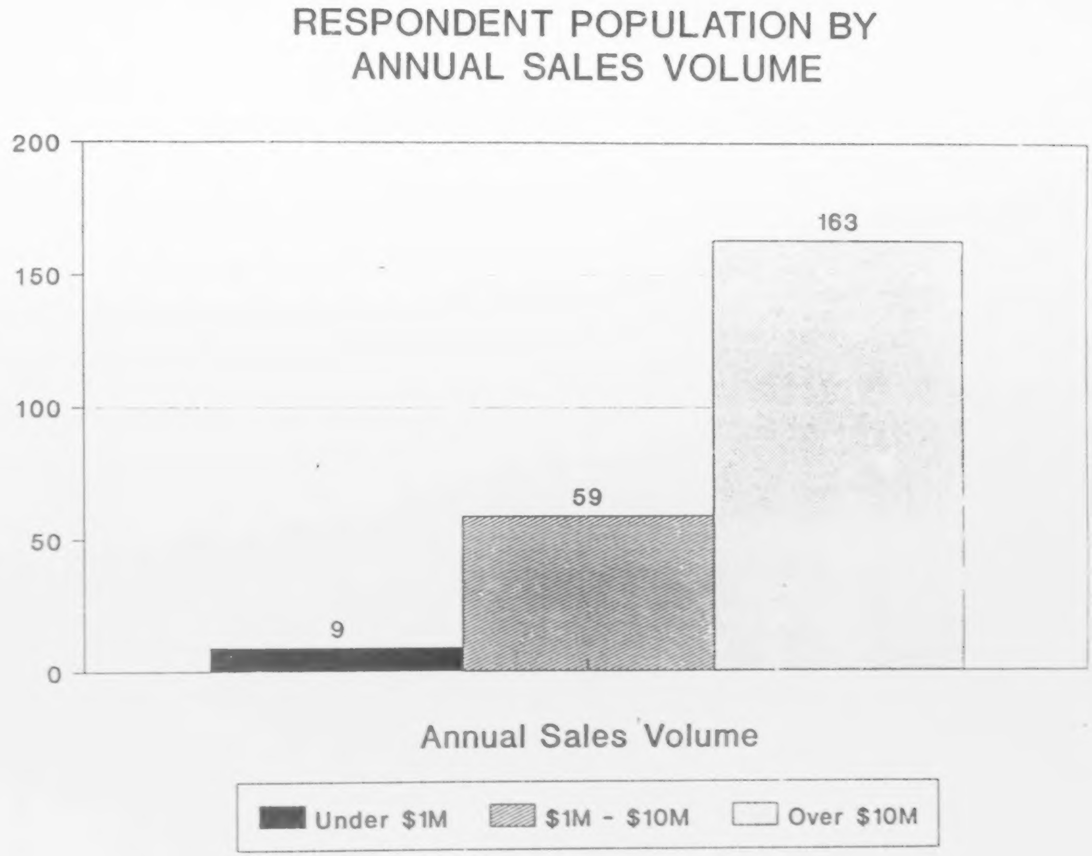
RESPONDENT POPULATION BY
ANNUAL SALES VOLUME
200
150
100
50
0
9
59
163
Annual Sales Volume
Under $1M
$1M - $10M
Over $10M

TABLE 2

RESPONDENT POPULATION BY INDUSTRY
AND ANNUAL SALES VOLUME

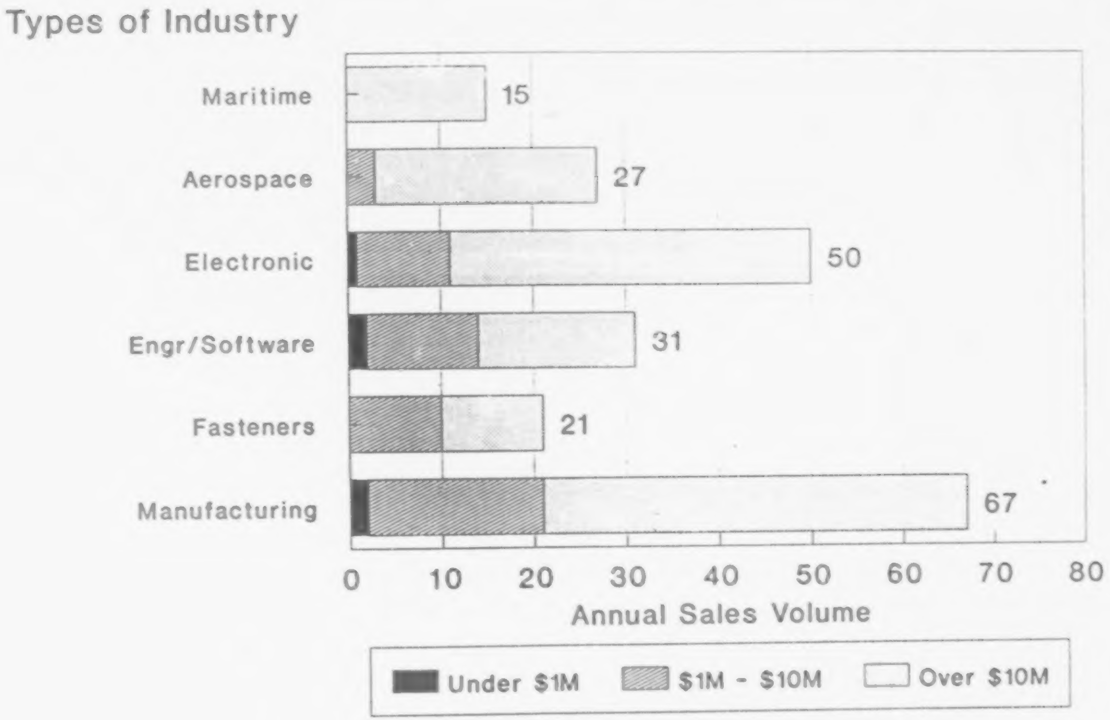

TABLE 3

EXPERIENCE OF RESPONDENTS IN THE DEFENSE BUSINESS

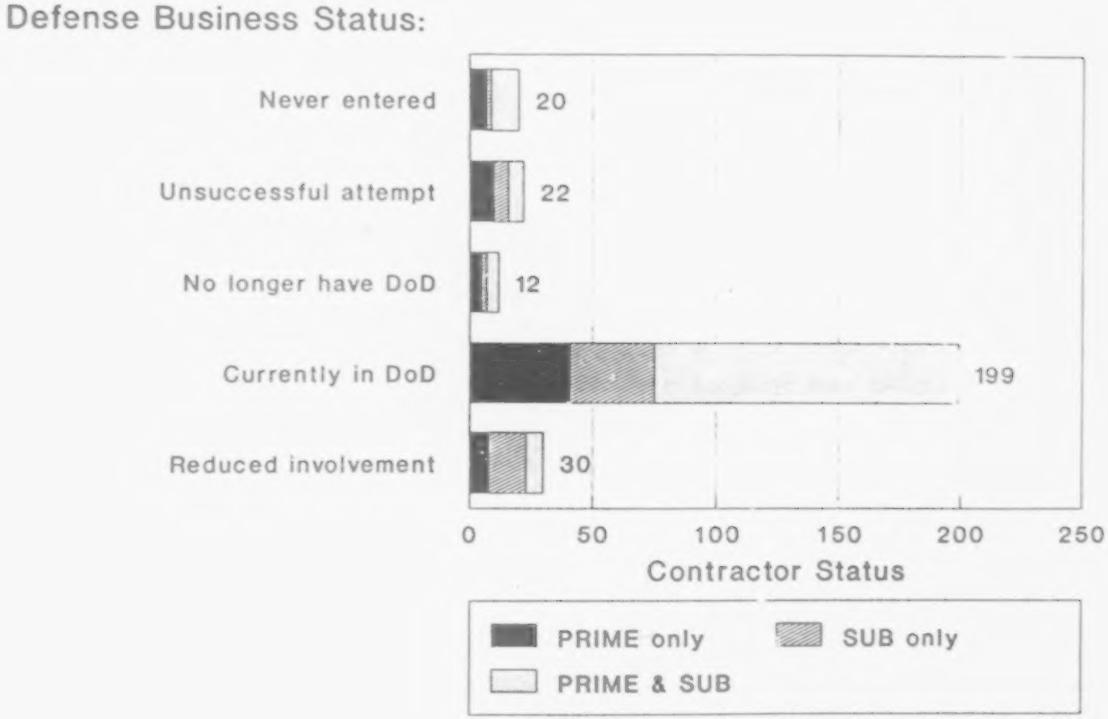

TABLE 4

RESPONDENTS' ATTITUDE TOWARD OBTAINING DoD BUSINESS

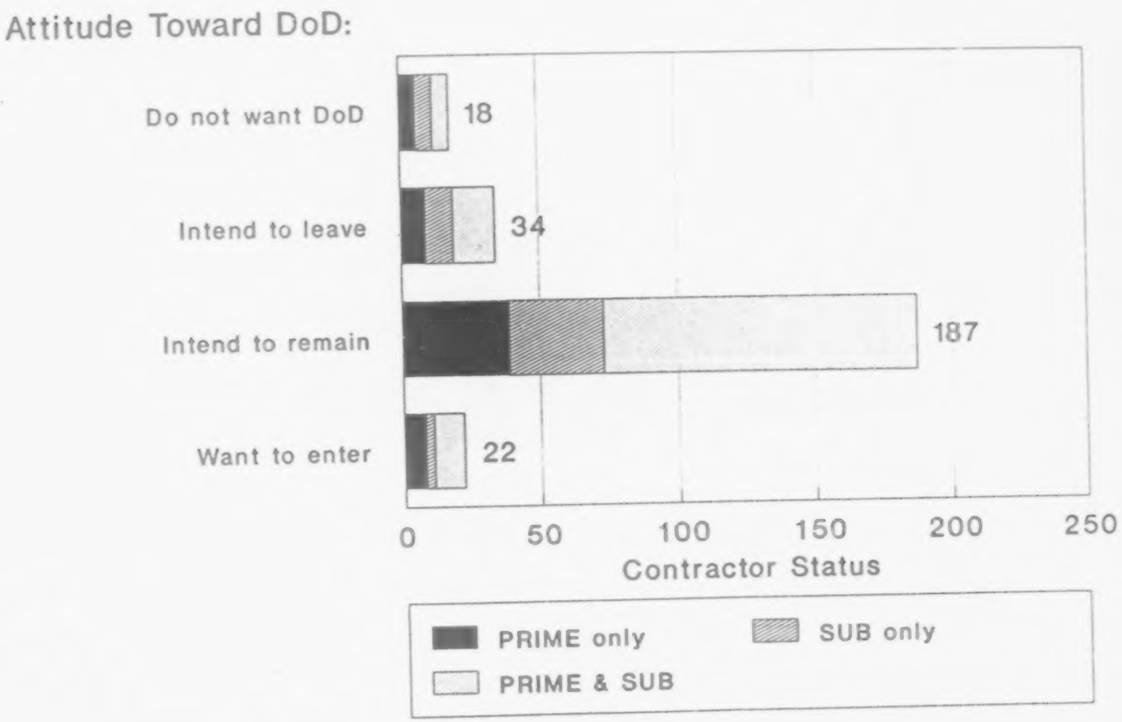

TABLE 5

FIRMS THAT INTEND TO DIMINISH OR LEAVE: PRIMARY ADMINISTRATIVE BURDENS

Top 6 Administrative Burdens:

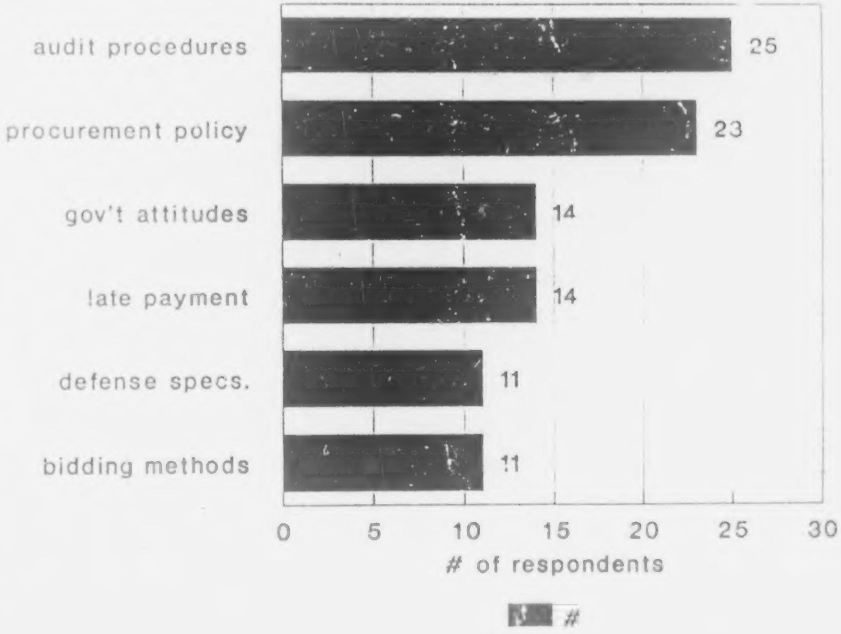

TABLE 8

FIRMS THAT INTEND TO DIMINISH OR LEAVE: PRIMARY INCENTIVES TO STAY

Top 4 Changes in Procurement:

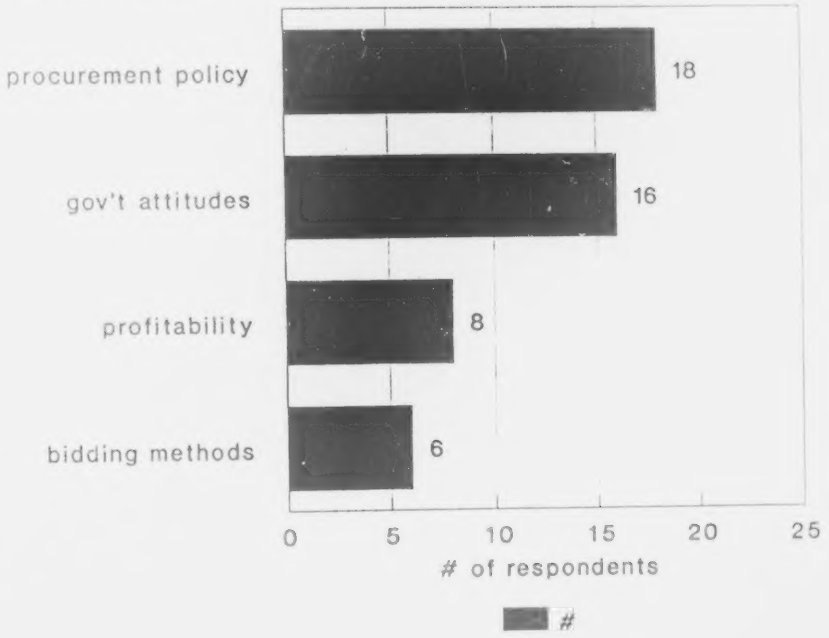

TABLE 8

TEN PRIMARY ADMINISTRATIVE BURDENS IN DoD BUSINESS

Respondents' Top 10 Admin. Burdens:

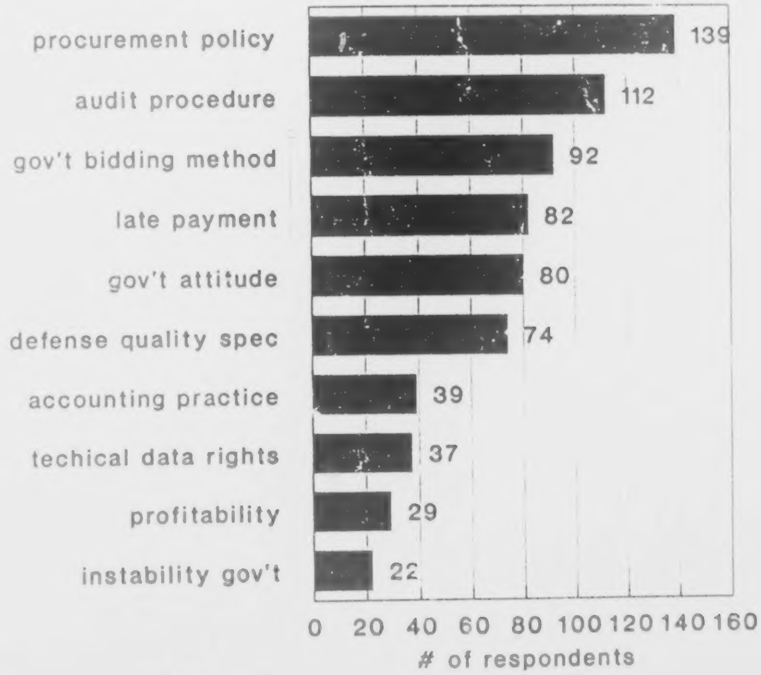

TABLE 9

TEN CHANGES PROVIDING GREATEST INCENTIVE TO STAY IN DoD MARKET

Respondents' Top 10 Changes:

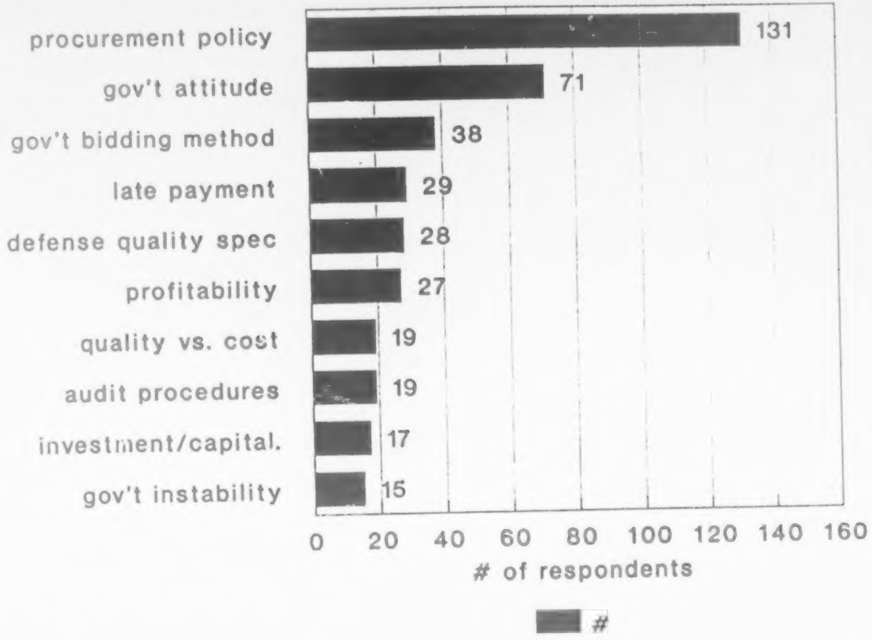

TABLE 10

FIRMS THAT HAVE ENDED OR REDUCED DOD BUSINESS

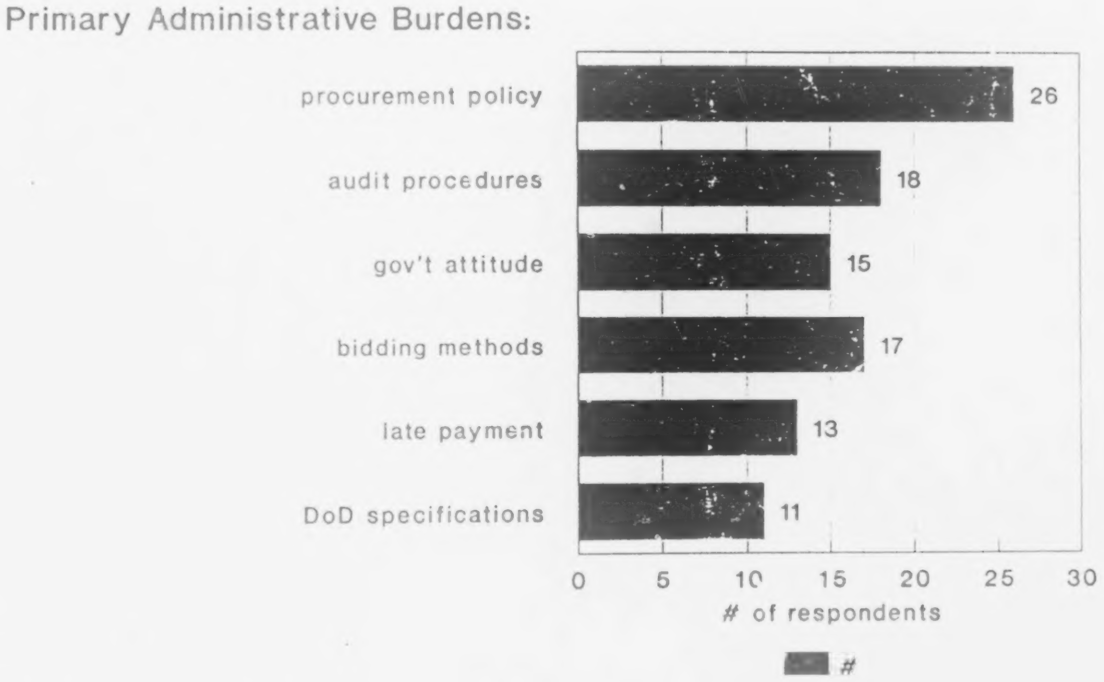

TABLE 11

FIRMS THAT HAVE ENDED OR REDUCED DoD BUSINESS

Primary Incentives to Stay:

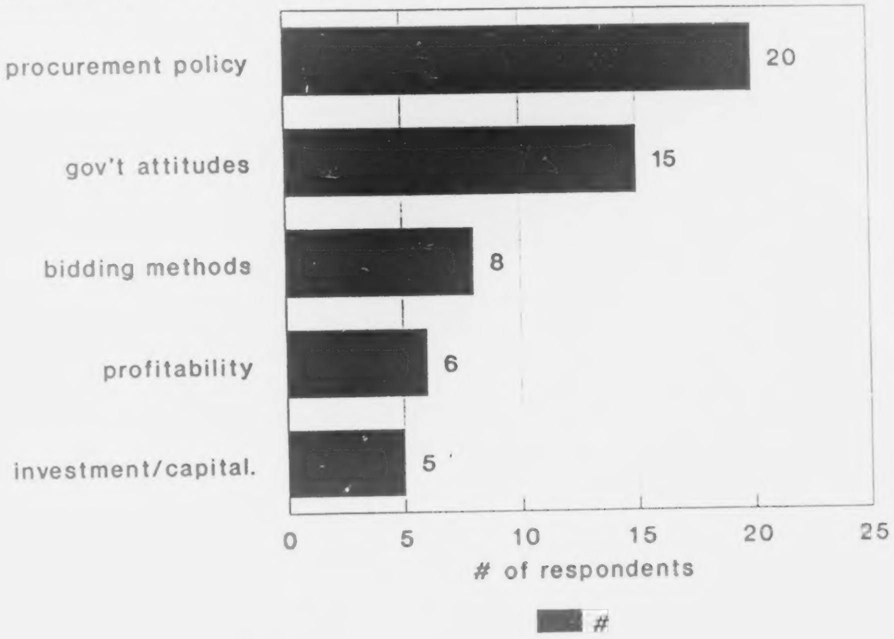

TABLE 12

SURVEYED FIRMS CURRENTLY IN THE DEFENSE MARKET

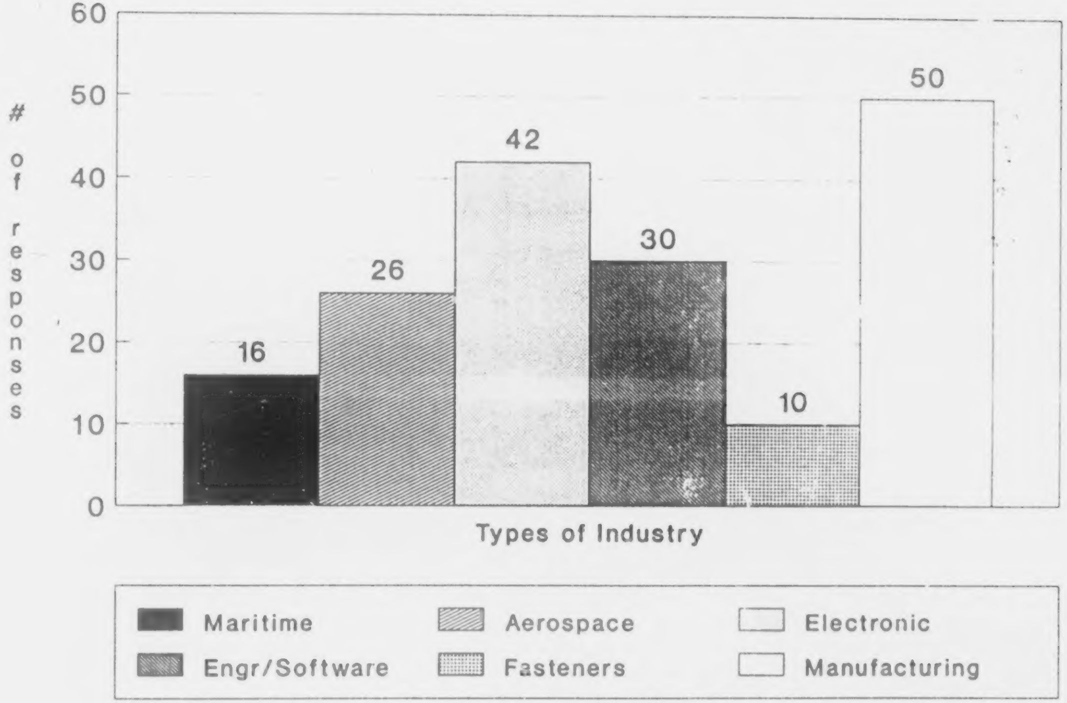

TABLE 13

FIRMS IN THE DEFENSE BUSINESS: PRIMARY ADMINISTRATIVE BURDENS

Top 6 Administrative Burdens:

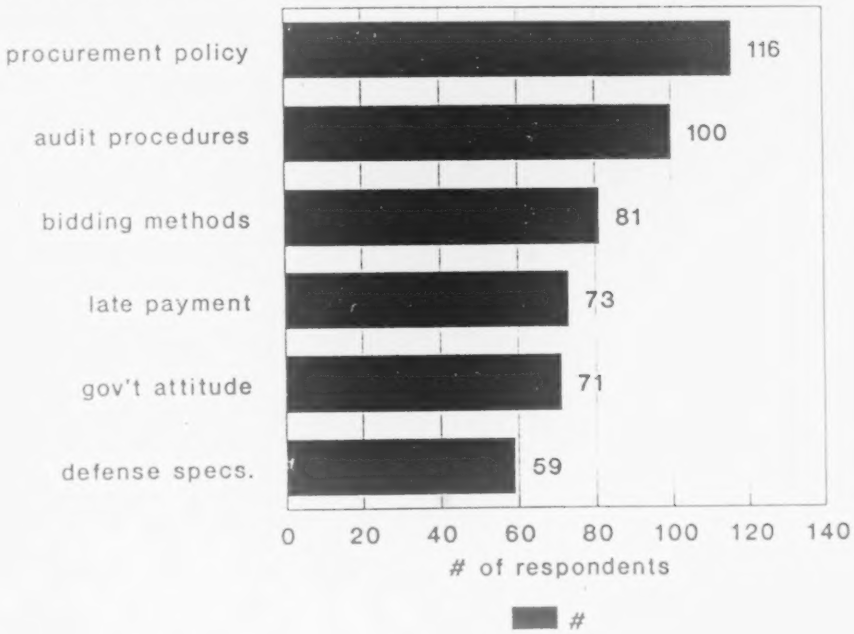

TABLE 14

FIRMS IN THE DEFENSE BUSINESS: PRIMARY INCENTIVES TO STAY

Top 5 Incentives to Stay:

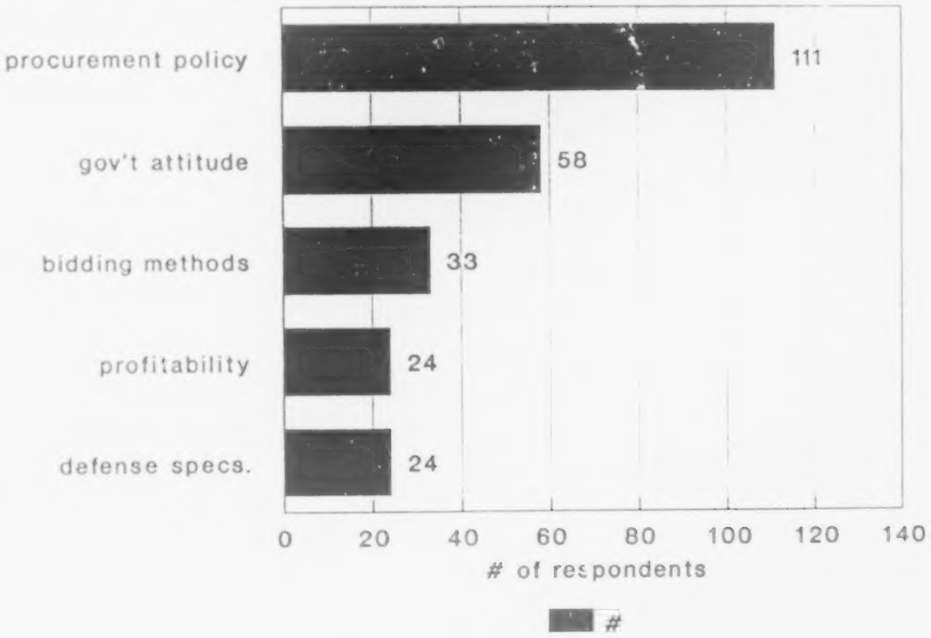

TABLE 15

FIRMS INTENDING TO REMAIN IN DEFENSE BUSINESS

Top 6 Administrative Burdens:

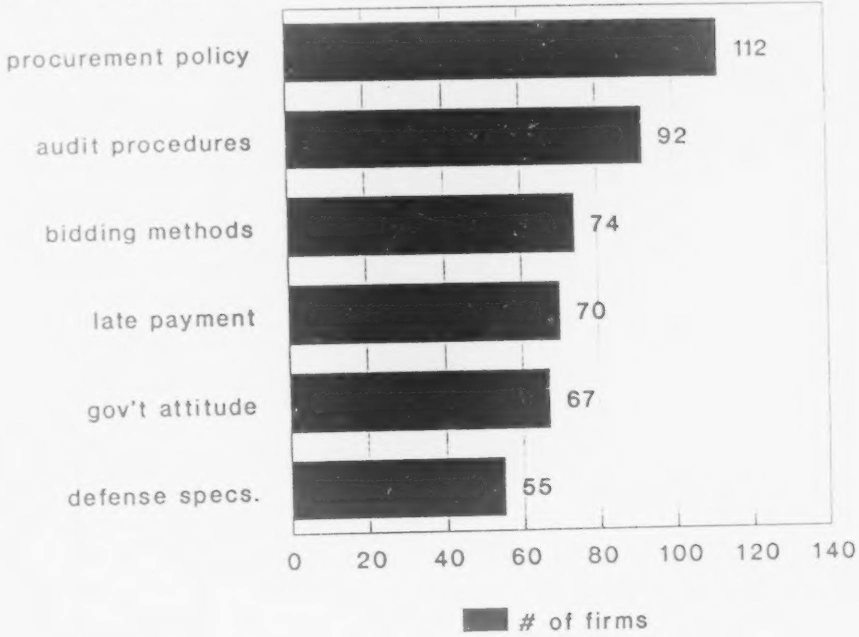

TABLE 19

FIRMS INTENDING TO REMAIN IN DEFENSE BUSINESS

Top 6 Incentives To Remain:

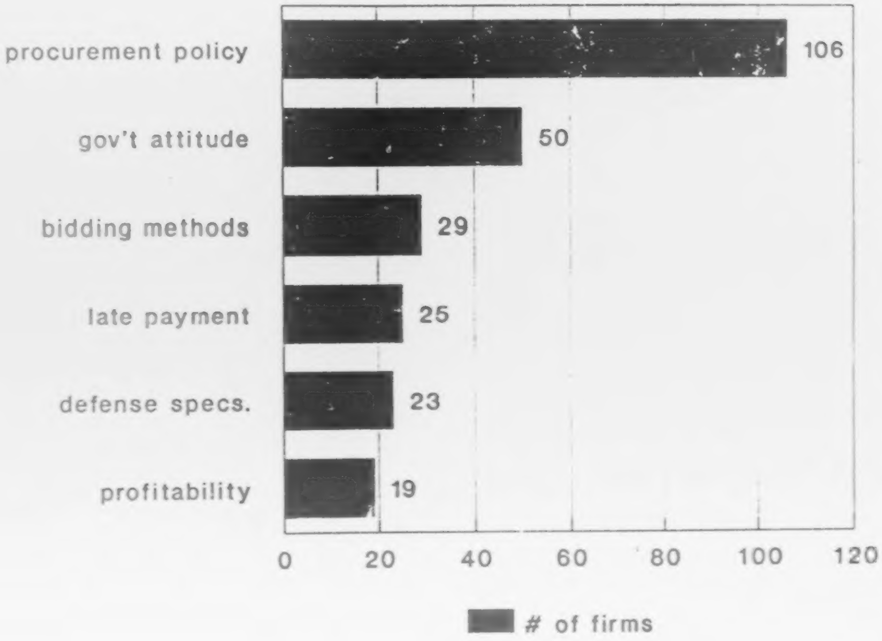

TABLE 19

PROCUREMENT POLICIES AS ADMINISTRATIVE BURDEN

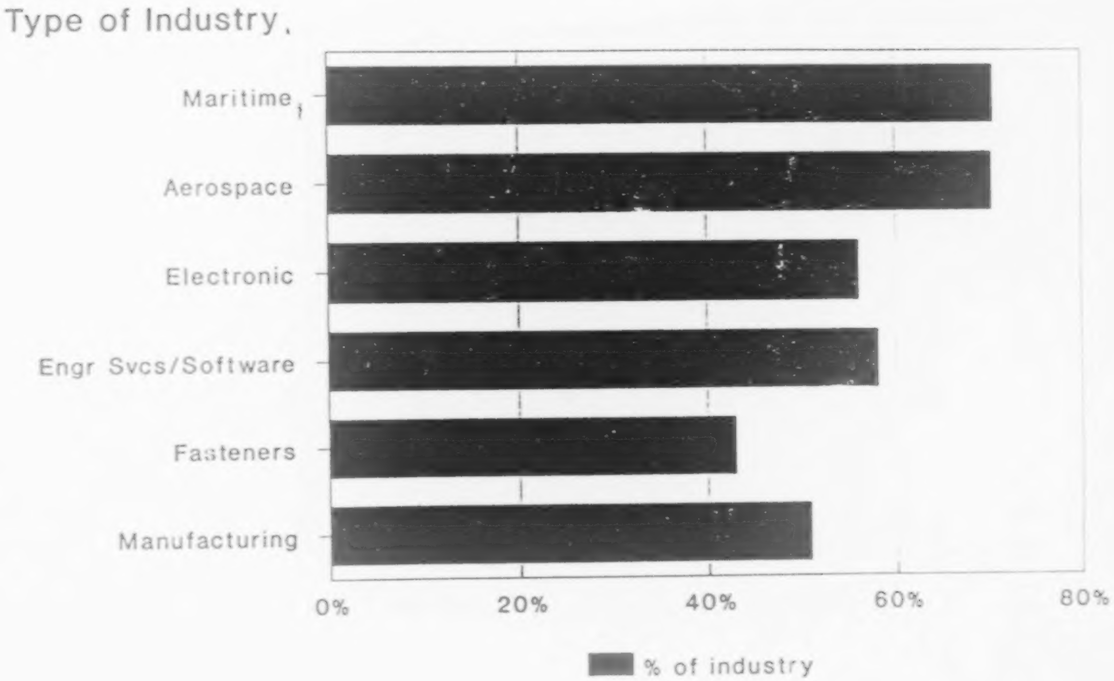

TABLE 20

AUDIT PROCEDURES
AS ADMINISTRATIVE BURDEN

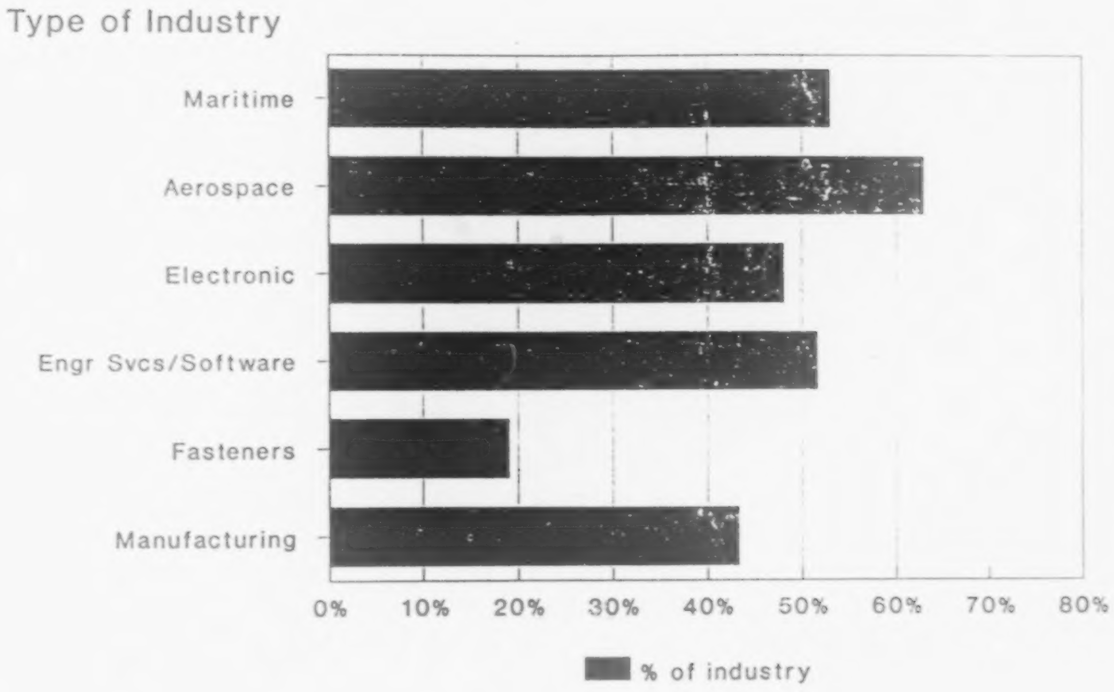

TABLE 21

GOVERNMENT BIDDING METHODS AS ADMINISTRATIVE BURDEN

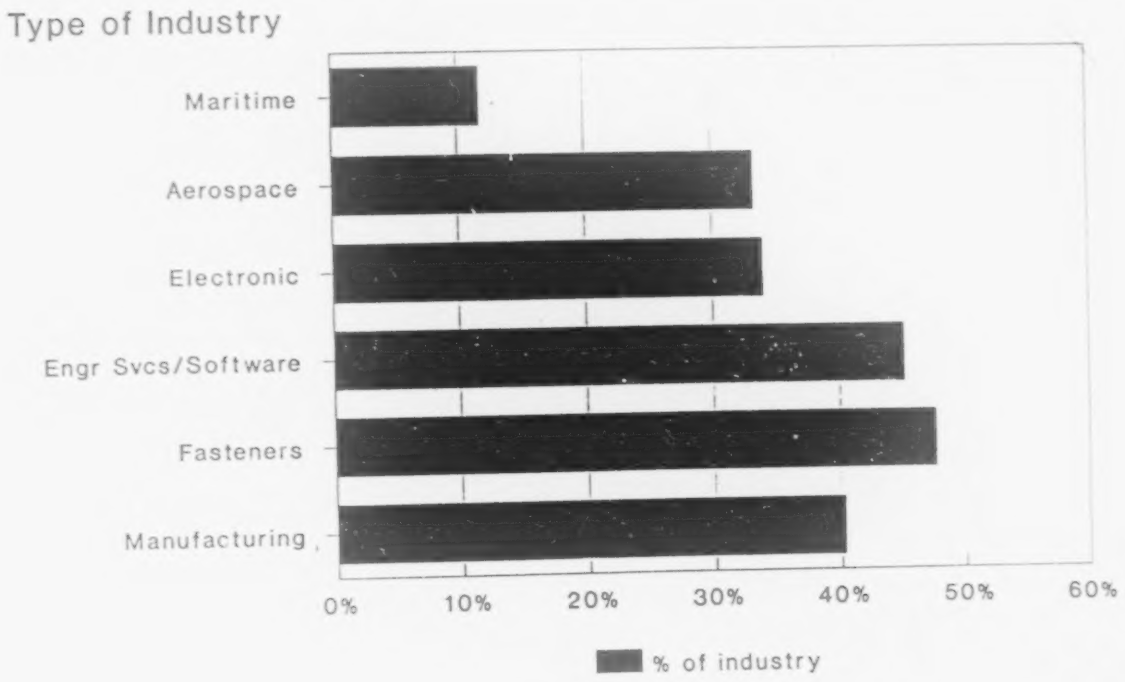

TABLE 22

LATE PAYMENT AS ADMINISTRATIVE BURDEN

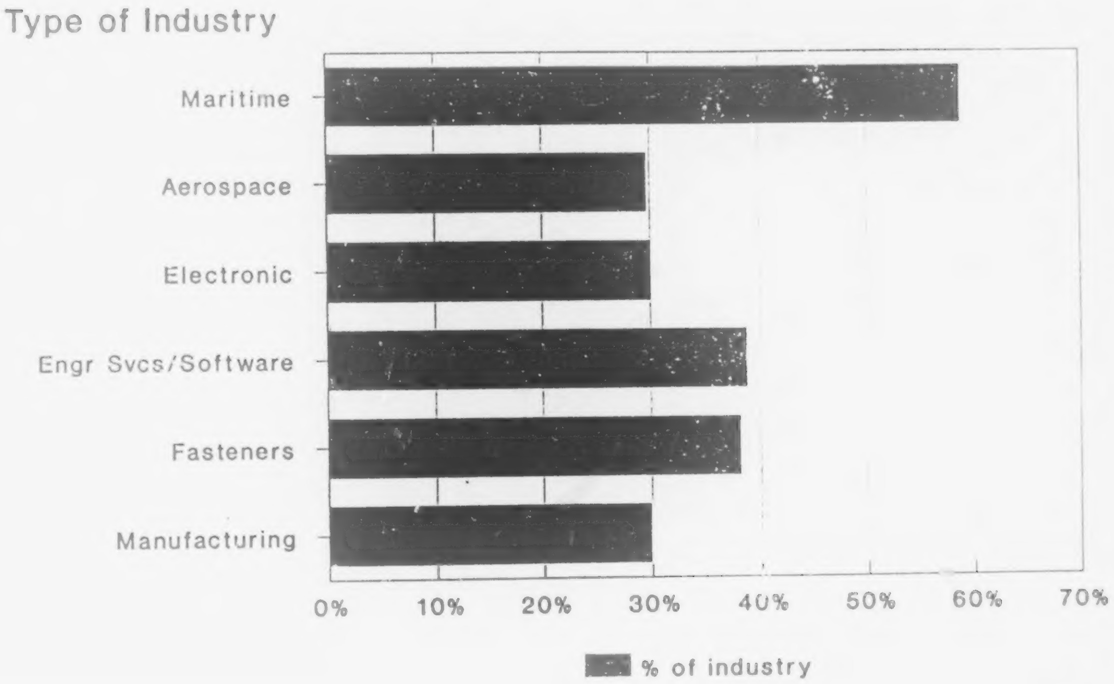

TABLE 23

GOVERNMENT ATTITUDE
AS ADMINISTRATIVE BURDEN

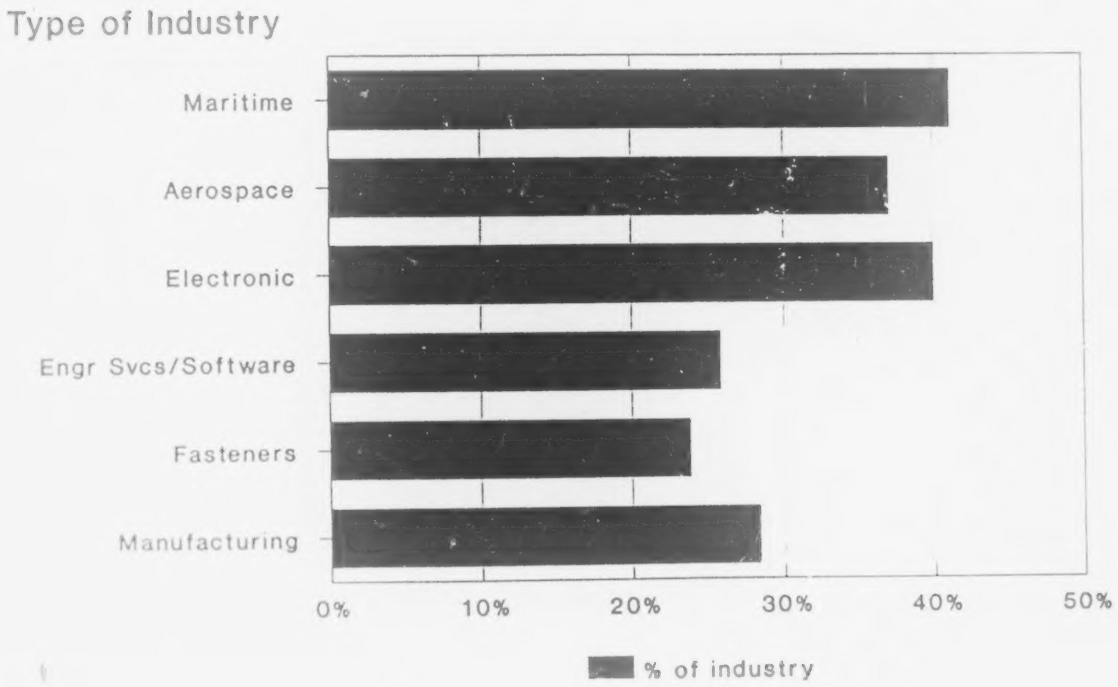

TABLE 24

CHANGE IN PROCUREMENT POLICIES AS INCENTIVE TO STAY

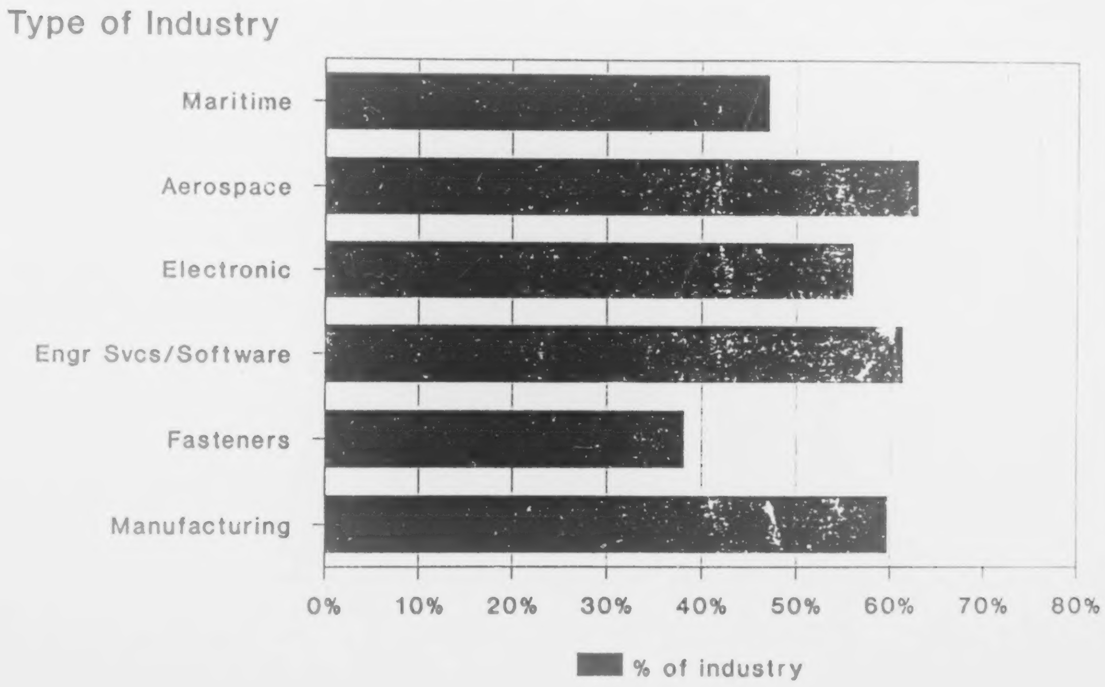

TABLE 26

CHANGE IN GOVERNMENT ATTITUDE AS INCENTIVE TO STAY

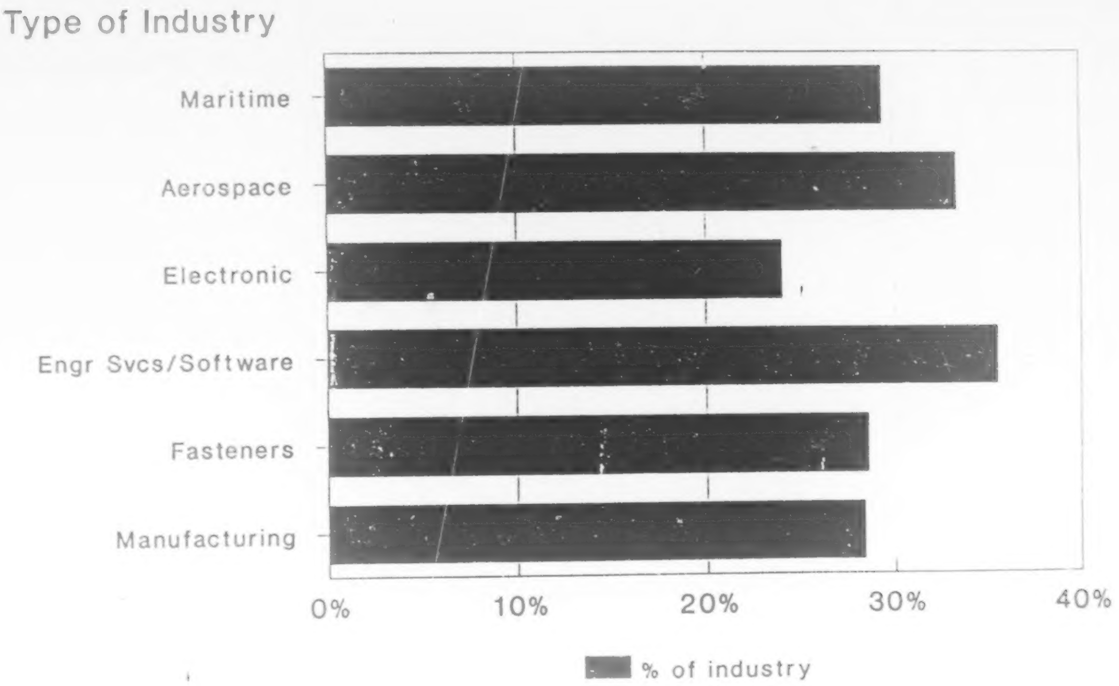

TABLE 27

CHANGE IN BIDDING METHODS AS INCENTIVE TO STAY

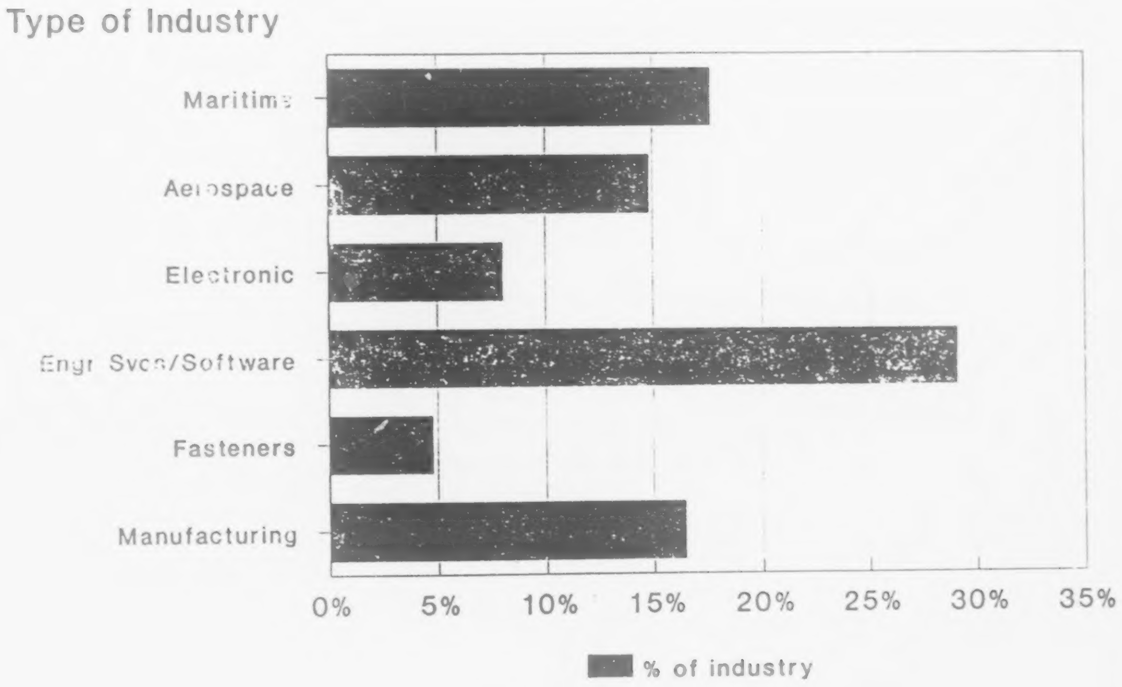

TABLE 28

CHANGES IN PAYMENT
AS INCENTIVE TO STAY

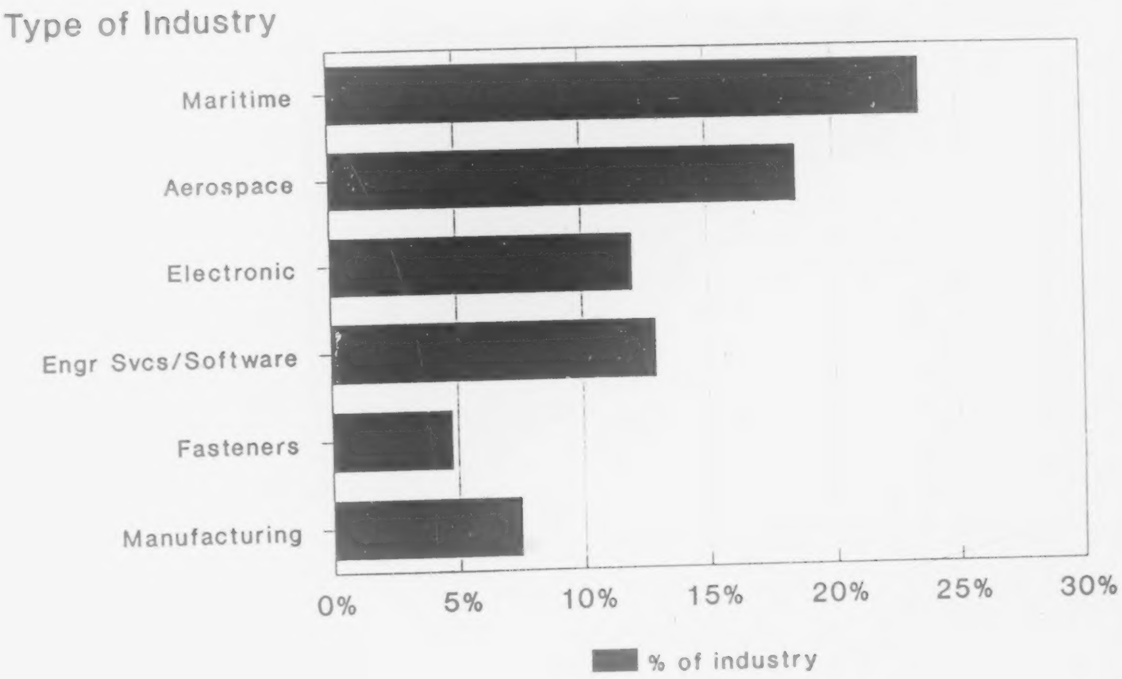

TABLE 29

CHANGE IN SPECIFICATIONS AS INCENTIVE TO REMAIN

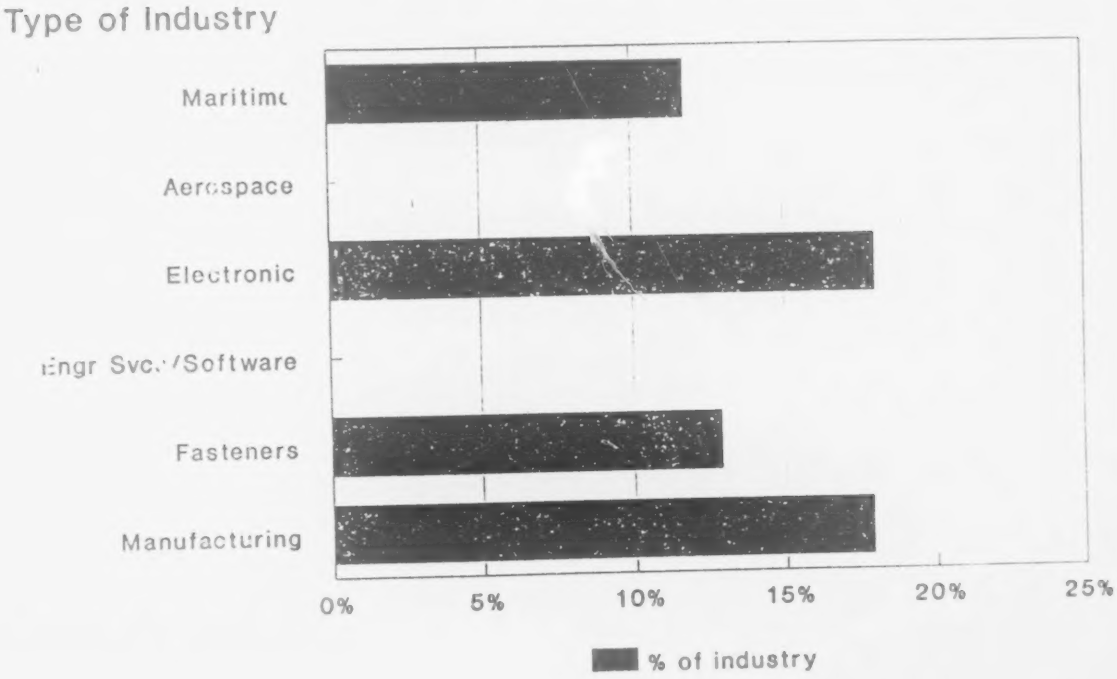

TABLE 30

CHANGE IN PROFIT POLICY AS INCENTIVE TO STAY

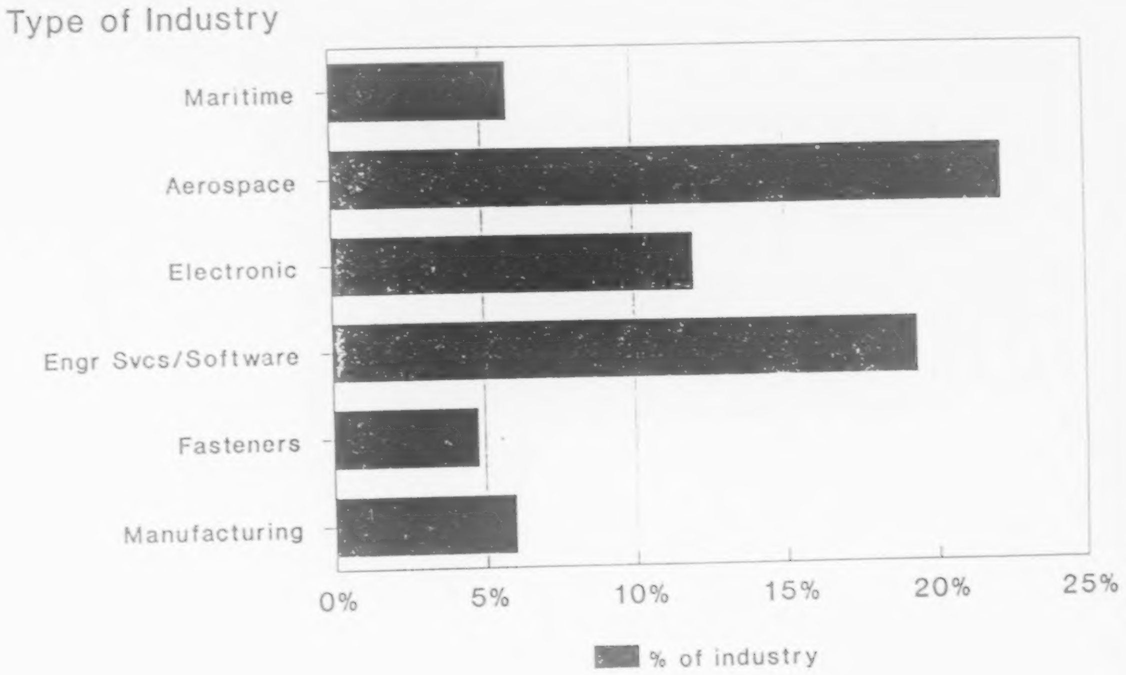

TABLE 31

23 Nov?

The Presidents' Roundtable
2651 Anchc Avenue Los Angeles, CA 90064

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November 27, 1990

To: All Members
From: The Steering Committee

Enclosed are full summaries of the consensus positions arrived at during the October 23, 1990 Roundtable at Hughes. They have been reviewed by all issue leaders and contributors. Please feel free to contact your issue leaders and provide your inputs and suggestions.

Since the Roundtable, we have been active in working out a game plan with AEA on the several issues that have been referred to them for concrete action. The result, we believe, is that we are now in a position to make our voices heard on the regulatory and oversight issues that we have been discussing during the last 2 conferences. From time to time, other issues of regulatory concern ("emerging critical issues") will come up for discussion and action. This is the case with the FAR on business combinations (FAR 31,205.52), first presented at the Roundtable, and now the subject of a task force focus. A white paper is being prepared on this issue. Another emerging issue, the recoupment of IR&D/B&P costs, has also gathered much momentum. Both of these issues are being taken up by the Government Affairs Committee of AEA.

The Downsizing and Asset Redeployment issues (what we have called "industry self-help issues") have developed in scope since our first discussions on the associated issues in February 1990. On the infrastructure issues (dealing with primes, subs and suppliers), several recommendations were forthcoming, one of which (TQM/CMI and their importance to our industry) will form the basis of our focus for the next meeting. On the internal options, the issues have elicited much interest among members, and remains an important area for discussion and sharing of ideas: the opportunities and barriers inherent in the downsizing marketplace are of some importance to the question of how we position ourselves during these times.

Since the Roundtable, we have heard from many members. You have shared with us your thoughts, your commendations, concerns, and suggestions. Almost without exception, you have expressed your desire to see more networking at our meetings. This is the single greatest value of our meetings. In keeping with our objective to bring together peers in an atmosphere conducive to mutual respect and candor, we will provide for more networking time and longer breaks during the next meeting. **The next Roundtable has been scheduled for Tuesday, March 26, 1991. Once again, Hughes has agreed to host the meeting at their wonderful facility in Los Angeles.** We hope to see most of our members there, hence this advance notice. Please mark your calendars accordingly and let us know asap if you plan to attend. Obviously, the effectiveness of the group and the conference is enhanced by the participation of the senior executive and by a minimum of substitution.

Thank you for your interest, your involvement and your commitment and contributions to our last Roundtable. Thank you also, for your continued interest in making our group an exceptional one.

The Presidents' Roundtable
2651 Anchor Avenue Los Angeles, CA 90064
October 23, 1990

Strategic Focus 1: Self Governance, Regulatory Oversight, & Adversarial Relations
Roundtable 1: Ethics and Self Governance
Issue Leader: Don Cassidy (Hughes)

Summary of Roundtable discussions and recommendations

Issue:
Current Government audit policies coupled with Qui Tam actions and a perceived lack of effective industry self-governance have fostered the criminalization of a broad range of procurement matters.

Discussion:
We need to begin to rebuild the relationship between industry and the DoD. A first opportunity to reduce oversight may be available to us with DCMC. We must stop internal oversight, and as such we need to have written self governance programs (i.e. DII, AEA, etc.) in place. They may be costly to implement and must be geared to the needs and budgets of individual companies. We must address critical issues such as protecting management's prerogatives concerning internal audit.

Recommendations:

1. The task force recommends that member companies embrace some form of structured self-governance and that individual companies seek out their government oversight agencies and seek to negotiate reduction in government oversight based on compliance with internal self-governance.
2. While it would be desirable for DCAA to report to the Secretary of Defense (Acquisition), this realistically cannot be expected to happen. Instead, we recommend AEA make a specific recommendation to DoD for a policy change as follows:

Recommended Revision to DoD policy -

"Allegations of criminal or civil fraud (internal or external) are to be reviewd by DoD utilizing the Contracting Officer or other experts in contracts matters who will provide an objective opinion before a government decision to proceed."

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J Snyder

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November 27, 1990

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October 23, 1990

Strategic Focus 1: Self Governance, Regulatory Oversight, & Adversarial Relations
Roundtable 2: Regulatory Oversight (Government & Prime)
Issue Leaders: Franz Worth (The Presidents' Roundtable)
& Jeff Amacker (Teledyne Controls)

Summary of Roundtable discussions and recommendations

Issue: Regulatory Oversight (including multiple audits, flow-downs, audit problems etc.) (See Conference Handbook)

Discussion:

1. The position paper (see Conference handbook) was reviewed and was agreed to in general. It is recognized that the paper is for use within The Presidents' Roundtable and must be edited or otherwise reworked if it is to be used outside the group.

2. The balance of the discussions concerned how and what appropriate action we should take. It was recognized that we need to have more of a partnering relationship with Government and less of an adversarial one. We decided that the Betti meetings appear to have been less than effective due to:

- Industry's one-sided recommentations (without reference to potential barriers/problems to their implementation), such as:
  - Reorganize DCAA reporting (under Betti)
  - Increase PCO authority
  - Better train and prepare audit teams
- Higher priorities within DoD
- Congress and DoD's concern over lack of industry response to CRAG/DII

Recommendations:

We concluded that we should:

- Determine current status of the issues under consideration within DoD
- Propose initatives/work issues through AEA's Government Affairs Committee
- Informally propose a joint, Industry-DoD TQM-type working group within DoD to work such related issues.
- If appropriate, develop a white paper based on a TQM-type approach.

Continued...Strategic Focus 1, Roundtable 2 Page 2

Other issues and discussion:
The issues of "flow-downs" was also discussed and we felt that problems are still present in the prime-sub/supplier relationship concerning:

- Basic interface between primes, subs and suppliers
- Excessive Flowdowns
- Multiple audits

We agreed that some if not all of these problem areas would be reduced if the DoD-Prime problems are resolved and that we would wait until our TQM meeting suggestion was made.

The Presidents' Roundtable
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Strategic Focus 2: Downsizing & Asset Redeployment
Roundtable 1: Emerging Critical Issues (External Options)
Issue Co-ordinator: Harry Halamandaris (Teledyne)

Summary of Roundtable Discussions, with recommendations

Issues:

a. IR&D/B&P Cost Recoupment; b. Business Combinations; c. Anti-trust/merger policies

a. Issue Leader: Dan Alspach (Orincon) (Pre-conference issue framework provided through discussion and consensus with other members, including Titan and SAIC):

1. Smaller niche companies have more opportunities than they can handle.
2. Need to focus action on affordability and competitiveness. These expenses should not have a fixed ceiling and should be judged solely on reasonableness.

Discussion:

- IRAD/B&P expenses are the only cost elements which are capped. These are the very elements which contribute the most to competitiveness.
- Competitive pressures will keep these expenses in line just as it does with other cost elements.
- They are still subject to "Reasonableness" standards.
- The government can impose ceilings by advance agreement on really large sole source contracts (> $50M)

Recommendations:

After Dan Alspach's presentation, a subcommittee consisting of Dan Alspach (Orincon), Chuck Miller (Bendix Oceanics), Chuck Nichols (SAIC), and Harvey Kreisberg (AIL) was formed to formulate the IRAD/B&P issues for presentation to the general session (the same day) and to make formal recommendations from The Presidents' Roundtable. The recommendations so presented and ratified are attached.

We would like AEA to promote and adopt both recommendations within the scope of their Government Affairs Committee. We recognize that the 2nd recommendation, concerning proposed new language for the relevant FAR (34,366.18) may be too broad and may need to be more specific and focused. We are available for comment, testimony and briefing as well as to support the AEA staff working on the issue.

Continued... Strategic Focus 2, Roundtable 1: Emerging Critical Issues

Issue b: Business Combinations (especially FAR 31,205-52)

Issue Leader: Jim Snyder (Armtec)

Discussion and Recommendations:
FAR 31,205-52 is seen to be a serious constraint to an industry in transition and needs to be given serious attention. The FAR states: "**When the purchase method of accounting for a business combination is used, allowable amortization, cost of money, and depreciation shall be limited to the total of the amounts that would have been allowed had the combination not taken place.**" (emphasis used is ours).

This would have the negative effect of disallowing reasonable deductions resulting from acquisitions made in our downsizing marketplace, to the detriment of the many companies whose survival depends on such acquisitions or combinations.

We have nominated Jim Snyder (Armtec), Derrel de Passe (Varian) and Roxanne Austin (Deloitte & Touche) to co-ordinate The Presidents' Roundtable's response. Please call any of them with your comments and suggestions, or call Rohit Shukla at The Presidents' Roundtable. We want this issue to be taken up through AEA's Government Affairs Committee.

Issue c: Anti-trust and Merger Policies

Issue Leader: Derrel de Passe (Varian)

We felt that this is not an area where The Presidents' Roundtable could make a difference, nor should we be concerned with an issue that is not exclusive to the defense industry, and which does have some merits from the point of view of government regulation and intervention. Clearly, there is little we may reasonably do given these constraints.

The Presidents' Roundtable
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Strategic Focus 2: Downsizing, Asset Redeployment & Diversification
Roundtable 2: Industry Self-Help issues (Internal Options)
Panel 2 Participants: James Bell (Thomson-CSF, Inc.), Cal Coolidge (T.I.)
Sal Monaco (DRI/McGraw Hill)

Summary of Roundtable discussions and recommendations

Issue:

Asset Redeployment, Diversification, Strategic Partnering: these represent some of the options available to companies caught up in the downsizing of the industry. Each area involves, however, barriers and opportunities. Given the complexity of the issues, no definitive recommendations can be expected; however, several considerations may be highlighted for further discussion and examination by CEO's and strategic planners.

Discussion:

Government money is not going to dry up, it will be redirected. Companies can either stay small and lean or grow by gaining market share in a downsizing market. Gaining market share in this environment will be particularly difficult as competition becomes more intense for the more promising market segment. In order to diversify and expand, we need to understand the new markets we must attempt to enter. Most diversification efforts have failed not because of a lack of technical or management skills, but because of failure to understand the market and customer.

Within the defense industry itself, we are in the midst of a profound transition from the supply-push mode to a new set of demand-pull circumstances. The nature, quality and scope of the threat has changed. Moreover, the need for threat-driven technology has given way to fiscally viable technology that is more cost-effective and driven by user-pull and budgetary constraints which face an increasingly fragmented national pie with greater demands from other constituencies. The equation has changed, from competition between companies or groups of companies to competition between companies supported by their countries (Japan, Inc., EC'92). Diversification, where it is an alternative, should be, in the short-term and intermediate long-term, in areas where one has the greatest strengths and knowledge of customer need. Total Quality Management and Continuous Measurable Improvement emerged in our discussions as dominant issues in the push toward enhancing our productivity as companies in our current markets and our global competi tiveness as a nation.

The DoD market is shrinking, but the U.S. economy will continue to grow despite the blips on the current screen. **Barriers** to diversification into the commercial marketplace need to be understood: high investment need, shorter product lifecycles, and product to market lead times, and critical differences in management style and culture between our familiar defense environment and the commercial marketplace.

The need for **alliances** is important in order to match (diminishing) resources with (diminishing) opportunities in the downsizing defense marketplace as well as to offset the need for the large investment dollars needed in the commercial marketplace. In any event, our long-term corporate objective may be assumed to be smaller, leaner, meaner companies whether we decide to stay, grow or diversify in the defense market, or enter/redeploy into commercial areas, gaining share of the shrinking defense market or finding shares in new, non-defense markets.

International teaming is a viable option. However, Europe needs to be looked at long-term. Also, laws and regulations work against the U.S. in many cases, and the same problem plagues European companies looking for joint venture partners in the U.S. There is a general perception that the U.S. has erected more barriers that prevent the strategic partnering between companies internationally than has Europe. As with the U.S., the defense industry in Europe will also consolidate. This will provide many opportunities for joint-venturing which reduce risk and increase the winning combinations in selected situations.

There are many significant opportunities available internationally: the Pacific Rim, the Newly-Industrialized Countries (NIC's) in Asia and elsewhere. During a time of economic slow-down at home, export markets offer the most promising growth opportunities for U.S. firms, particularly for those with capabilities in high-technology, high value-added goods and services. For defense companies, many areas of expertise are in great demand and will continue to be so in these countries. Meanwhile, however, opportunities are available in the U.S. as well, in other defense sectors or other government markets that share similar management styles and cultures.

The types of relationships that may be viable during this period are: joint ventures, mutual acquisition, conventional prime/sub arrangements, strategic alliances and acquisitions.

Whatever alternatives we choose, however, certain principles need to be embraced prior to adopting the option/s, including: a total commitment from management to the decision, a thorough market research and analysis effort and a sophisticated understanding of the subtle cultural and management style differences between the entities in the potential relationship or area of business.

Recommendations:

1. The Presidents' Roundtable could serve as a catalyst to develop relationships between companies that have underutilized assets and those new and emerging companies who have the need for such assets. Assets could be defined as capital equipment, financial resources, people (especially knowledge workers) etc.

2. While financial arrangements as outlined above may be harder to establish, the possibility of classic strategic partnering (where the quid pro quo for facilitating capital sourcing may be a share in the technology or product that results from such partnering)is one that we should encourage.

3. The Roundtable could encourage mentoring among its own members. As part of this effort to help medium and small companies, one suggestion is to form a self-help organization with task teams formed to study various aspects, such as the following, and report results to all members:
    - Where to get market information
    - Types of alliances with the pros and cons of each analyzed
    - Legal constraints and guidelines
    - Barriers to operation
    - Sources of capital and exchange rate protection

4. The Roundtable could also serve as a forum for presentations and programs for small and medium companies to enlighten and educate them on management and business culture in Europe and other foreign countries.

5. The Presidents' Roundtable could provide access to resources and actively facilitate mentors who wish to provide capital and other resources to small businesses caught in the crunch, whose processes, technologies and people are a vital resource that should

be encouraged and promoted for example, a prime may substantiate the need and value of a loan and/or provide capital for a vital supplier or subcontractor in return for considerations on technology and first rights.

6. We should continue to explore these and other emerging concerns so that we can add focus to our plans of action for our members who must find ways to adapt to the new barriers and opportunities.

7. The Presidents' Roundtable could sponsor a working forum on international trade opportunities, bringing together experts on international markets, competitive issues and regulatory and policy issues to assits its member companies in identifying specific opportunities to market their products overseas.

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Strategic Focus 2: Downsizing, Asset Redeployment & Diversification
Roundtable 2: Industry Self-Help issues (Internal Options)
Panel 1 Issue Leader: James Dever (Hughes)
Other contributors: Madeline Pedego (EER), Cristi Cristich (Cristek), Ella Williams (Aegir)

General:
The group had mostly a small business focus.

Issue:
Industry infrastructure shifts and trends during downsizing: Prime-sub relationship, TQM/CMI leading to enhanced productivity and competitiveness, enhancing and maintaining integral supplier base, capital/cash flow problems especially for smaller companies and suppliers.

Discussion:
The issue of cost of capital as a major driver of our financial health and viability was discussed at some length. This being a real problem in the short and long-term with the downsizing industry (the non-availability of capital, or the lack of capital sources), many proposals were suggested, ranging from joint financing by primes and their best value suppliers and joint applications for funds being made by coalitions of companies in various sectors of the industry including the hard-hit SDB companies.

The issue of workforce education was also discussed. There is a strong need for an approach to education and commitment of our industry on the concept and principles of Total Quality Management and Continuous Measurable Improvement, which it is felt, would lead to enhanced productivity and competiveness.

The Mentor-Protege Act was felt to be an important piece of legislation with respect to industry's encouragement of the mentoring process for small minority-owned businesses.

(see over)

Continued...Strategic Focus 2, Roundtable 2, Panel 1, Page 2

Recommendations:

- TQM should be required of both primes and subcontractors
- Education on TQM/CMI should be instituted throughout industry
- Primes should mentor subs and suppliers
- A joint advisory group of 5-6 CEO's from primes, subs and suppliers to suggest prime-sub/supplier guidelines should be organized and developed
- A more uniform audit requirements policy/set of guidelines should be developed (possibly worked by above team?)
- Primes should upgrade their small business offices
- We should explore joint financing by primes and "best value" suppliers and joint applications for funds through traditional and other channels especially for smaller companies and SDB's
- Primes should support and encourage programs like the California Supplier Improvement Program

We are anxious to hear from our members with respect to suggestions and comments on our discussions. We expect to focus on a number of the issues that are "actionable" from the group's point of view.

Enclosure 2

AIA
AEROSPACE INDUSTRIES ASSOCIATION
1250 Eye Street, NW, Washington, DC 20005

NATIONAL SECURITY INDUSTRIAL ASSOCIATION
1025 Connecticut Avenue, NW, Washington, DC 20036

March 12, 1991

Ms. Eleanor R. Spector
Director of Defense Procurement
Office of the Secretary of Defense
The Pentagon, Room 3E144
Washington, D.C. 20301-1900

Dear Ms. Spector:

The Aerospace Industries Association (AIA) and National Security Industrial Association (NSIA) are extremely concerned with the recent issuance of a Final Rule (FAC 84-58) amending FAR Cost Principles at 31.205-10, 31.205-11 and 31.205-16, and establishing a new Cost Principle at 31.205-52, which expressly disallows the cost associated with the step-up of assets resulting from the purchase method of accounting for business combinations.

As discussed in the attached White Paper, we believe this FAR regulation:

1. Conflicts with generally accepted accounting principles ("GAAP") and Cost Accounting Standards (CAS); will have serious economic effects on the defense industry; and involves administrative problems in its implementation.

2. Is being implemented in an inappropriate and unreasonable manner as exemplified in the recent DCAA "Audit Guidance on Allowability of Costs Resulting from Business Combinations" dated 13 August 90. This guidance makes unallowable, on a retroactive basis, costs which were expressly allowable when the incurring transaction took place. Such an application represents an unconstitutional taking of property and a violation of Government contract law.

The DCAA Audit Guidance which applies the new regulation retroactively should be immediately withdrawn before it causes a flood of unnecessary litigation. While NSIA and AIA believe that the regulation itself is fundamentally flawed, we recognize that a quick solution to the differences between industry and the Government may be difficult. We recommend that a process action team, composed of both Government and industry representatives be formed to address these matters. We would like to schedule a meeting with you at your earliest convenience to begin to determine a mutually acceptable solution to these matters. Paul Cienki, Director, Financial Administration, AIA, is the point of contact for this effort. He can be reached at (202) 371-8526.

Don Fuqua
President
Aerospace Industries Association

Wallace H. Robinson, Jr.
President
National Security Industrial
Association

cc: Dr. Allan V. Burman, Chairman, CAS Board

AIA AND NSIA "WHITE PAPER" ON NEW DEFENSE DEPARTMENT RULES ON MERGERS AND ACQUISITION ACCOUNTING

I. The Purchase Method of Accounting Is Recognized Under Both GAAP and CAS

The purchase method of accounting, which has been relied upon for many years in the financial accounting community as a generally accepted accounting principle ("GAAP"), mandates that the acquiring company in a business combination record the acquired company's assets at their fair market value. Accounting Principles Board (APB) Opinion No. 16 recognizes the purchase method of accounting as acceptable and, in fact, mandates its use for the most common types of business combinations. Similarly, CAS 404, Capitalization of Tangible Capital Assets, promulgated in 1973, specifically recognizes and mandates the use of the purchase method for most types of business combinations (CAS 404.50(d)). The purchase method of accounting has been therefore widely used in Government contract accounting and has been accepted by the Government as fair. Gould Defense Systems, Inc., ASBCA No. 24881, 83-2 BCA Para. 16,676. The Government has relied upon and required the use of the purchase method of accounting for over 17 years and has provided no basis for now changing the longstanding required use of this accounting method.

When the Government set forth in the Federal Register its intention to change the current regulations, the ostensible reason was the perceived problem that "in circumstances when a contract price will be based upon the contractor's costs, the Government (is) at risk of paying higher prices simply because of a change in ownership of the supplier." 52 F.R. 41714, October 28, 1987. This statement assumes that it is inappropriate to revalue assets as part of or incident to a business combination if such a revaluation will increase the price to be paid by the Government.[1]

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[1]/ For other types of business combinations, GAAP and CAS 404.50 (e) mandate the pooling method of accounting. Under the pooling method of accounting, the acquiring company is required to record the assets of the acquired company at their original cost to the acquired company (i.e., historical cost or book value).

In those cases in which a revaluation occurs, the Government is clearly protected from incurring increased costs due to such a business combination by the requirement that the new owner and the seller enter into a novation agreement. It is well established that the terms of the standard novation agreement preclude the write-up of assets on ongoing contracts. *See Sundstrand Turbo Division v. United States*, 182 Ct. Cl. 31, 389 F.2d 406 (1968); *LTV Aerospace v. United States*, 192 Ct. Cl. 191, 425 F.2d 1237 (1970). The new regulation circumvents the novation process by preventing any write-up on any future contracts in perpetuity.

II. The New Regulation Is Inconsistent With CAS

A. Introduction

The new regulation permanently precludes a contractor from recovering depreciation and other asset-related costs based upon their fair market value. Such a rule requires an abandonment of the purchase method of accounting. By forcing the acquiring company to maintain the assets of the acquired company at their previously recorded levels, the new regulation totally ignores the economic realities of the transaction and promotes an inconsistency between CAS and FAR as to the acceptable accounting practices which must be used in accounting for business combinations.

B. The Purchase Method of Accounting Defines the Method of Measuring the Basis of the Assets of a Company Acquired in a Business Combination

CAS 404.20, the "Purpose" section of CAS 404, provides that "for purposes of cost measurement, contractors establish and adhere to policies with respect to capitalization of tangible assets which satisfy criteria set forth herein." The capitalization of an asset must be measured by the cost of acquiring the asset, which is the purchase price of an asset. CAS 404.40(a); CAS 404.50(a).

Depreciation must be measured using the capitalized cost (*i.e.*, the purchase price) of an asset. CAS 409.40(a) provides that:

> The depreciable costs of a tangible
> capital asset shall be its capitalized
> cost less its estimated residual value.[1]

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[1] CAS 414 also provides that cost of facilities capital be measured using an asset's capitalized cost.

In a business combination accounted for under the purchase method of accounting, the acquiring company's capitalized cost of the acquired company's assets are those assets' fair market values. Similarly, the depreciable costs of the acquired company's assets are to be measured based upon their fair market value at the time of the business combination.

C. *The New Cost Principle Conflicts with the Method Established under CAS 404 for Computing the Basis in the Acquired Assets as Well as the Depreciation Provisions of CAS 409*.

Under FAR 31.205-11(c) ("Depreciation"), depreciation is allowable if reasonable and allocable. Depreciation, as noted, to be allocable under CAS 404 and CAS 409 must be measured at its capitalized cost. Yet if the purchase price of an acquired company's assets is measured in accordance with the allocability requirements of CAS 404 (specifically, the purchase method of accounting), the associated depreciation and cost of facilities capital costs are made unallowable under FAR 31.205-52.

Under the new regulations, for depreciation costs and cost of facilities capital costs to be allowable after a business combination accounted for under the purchase method of accounting, they must be measured by reference to the prior owner's basis in the assets; that is, by ignoring the purchase method of accounting required under CAS 404. Furthermore, depreciation and cost of facilities capital costs may not be measured based at their capitalized costs in accordance with CAS 404.50(d). Stated another way, under the new regulations, in order to be chargeable to Government contracts all business combinations must effectively be accounted for as if they were a business combination accounted for under the pooling method. Yet, CAS 404 precludes most business combinations from being accounted for under the pooling method and mandates the use of the purchase method.

D. *It is Solely Within the Province of the CAS Board to Determine Cost Measurement Issues*.

It is solely within the province of the CAS Board to determine how the costs of an asset are to be measured. The CAS Board could have mandated that the depreciable (acquisition) costs of assets acquired in any type of business combination be measured by the costs incurred by the previous owner to acquire the assets. Instead, the CAS Board specifically mandated in business combinations accounted for under the purchase method of accounting, that the asset values be reflected at their fair market value. The FAR Council cannot adopt a measurement of allocability rule which is inconsistent with CAS 404, 409 or 414. *See United States v.*

Boeing Company, 802 F.2d 1390, 1391 (Fed. Cir. 1986).

If the Government desires a change to the required use of the purchase method of accounting now contained in CAS 404, the appropriate procedure is to propose amending CAS 404 to the CAS Board and not engage in the subterfuge of altering the purchase method of accounting by amending FAR regulations before the new CAS Board has even had the opportunity to consider this issue.

III. The New Regulation Will Inhibit Future Business Combinations and as such Adversely Impact the Government.

The new regulations will also inhibit future mergers and acquisitions. The Government, by improperly focusing on a single cost that increased as a result of the business combination, ignores the advantages accruing to the Government from the business combination viewed as a whole. The Armed Services Board of Contract Appeals has long recognized the advantages to the Government of contractors' business combinations:

> numerous . . . benefits and economies may accrue to the contractor (and thereby the Government) as a result of the merger, including increased capital resources and management abilities.

Gould Defense Systems, Inc., ASBCA No. 24881, 83-2 BCA Para. 16,676.

Moreover, in a time when the defense budget is being reduced, there is a great likelihood that there will be consolidation within the defense industry. Government policy should encourage such mergers and acquisitions since the alternative would mean that less financially secure companies would be forced to go out of business. The new regulation, however, would serve as disincentives to acquire a defense contractor as the acquiring company could not recover its investment in the acquired company through depreciation and related costs. Therefore, many companies which might be the subject of an acquisition may simply cease operations if an acquiring company cannot be located. The new regulation encourages such a result, with a potentially deleterious effect on the country's defense industrial base as well as for economy as a whole.

IV. The New Regulations Will Result in Administrative Requirements The May Be Impossible to Meet.

The Administrative burden which may be incurred by contractors to meet the requirements of this ruling is unfair and may be extremely difficult, if not impossible, to implement.

For example, another set of books will be required to track values for fixed assets in order to comply with this rule. While two sets of books, on for financial reporting and one for tax purposes, the only difference between them has been depreciation methods. Moreover, both sets could be obtained from the same database for acquisition data and first cost. This new set of books will require a new database to accommodate the previous owner's acquisition data and cost, thus increasing the complexities inherent in the record maintenance and reconciliation process. The contractor will also be required to use the depreciation method used by the previous owner, which may conflict with the depreciation methods used by the contractor on other assets, thus promoting inconsistency in accounting methods which is prohibited under CAS 401 and 402.

While on a prospective basis the buyer may have difficulty obtaining all necessary data to comply with this new rule, when the new rule is applied retroactively (discussed in Section V), the problem may be insurmountable. At the time of the transaction, the acquirer did not need the detailed data required to maintain the now prerequisite additional set of books. For some contractors, the assets in question may have been sold numerous times in recent history, compounding the problem. The current existence or availability of the necessary data is not under the acquirer's control, yet the DCAA memorandum places the burden on the acquirer. Such a requirement is totally unreasonable.

V. The New Regulation Is Being Applied in a Retroactive Manner and as Such Is an Unconstitutional Taking and Violation of Government Contract Law.

The manner is which the present regulation is presently being interpreted by DCAA is of grave concern. In an August 13, 1990 memorandum to Regional Directors, DCAA stated that the new regulation is to be applied on a retroactive basis. Under DCAA's position, any cost due to a revaluation of assets under the mandated use of the purchase method of accounting as a result of any business combination, even a combination which predates the effective date of this regulation, will be disallowed. Contractors that previously entered into business combinations will now be faced with the sudden disallowance of costs on transactions which may have taken place many years ago.

A fundamental flaw exists in a regulation that makes continuing costs from an earlier transaction unallowable in the future. The contractor is placed in an untenable position because there is no opportunity to restructure a previously completed agreement. The arbitrary disallowance of costs incurred by the acquiring company in a business combination is unfair since the incurrence of the costs by the acquiring company was partially determined by its prospective recovery under existing rules. The retroactive "grandfathering" of this rule devalues an already closed transaction.

DCAA's application of the new rules on a retroactive basis represents an unconstitutional Fifth Amendment taking of property. This retroactive interpretation will result in the devaluation of a company which has previously entered into a business combination. For example, a company which has expended $10 million (the fair market value) to acquire a company with the book value of $6 million and has expected to recover that fair market value through depreciation will, under the DCAA interpretation, only recover $6 million. This is a substantial negative impact on the value of the acquired company and thereby reduces the value of the combined company as well. Thus, by issuance of the DCAA interpretation, the Government has suddenly and substantially lowered the value of contractors subject to acquisition. This represents an unconstitutional Fifth Amendment taking of property. See Armstrong v. U.S., 364 U.S. 40 (1960).

Moreover, by effectively disallowing the purchase method of accounting for business combinations on a retroactive basis, the Government is in violation of the longstanding principle that the Government may not retroactively change a contractor's method of accounting. Litton Systems, Inc. v. U.S., 449 F.2d 392 (Ct. Cl. 1971); Martin Marietta Corp., ASBCA No. 14159, 71-1 BCA Para. 8783. Contractors entering into business combinations prior to the new regulations priced their acquisitions based upon the Government's long time acceptance and mandated use of the purchase method of accounting. DCAA's interpretation would prejudice these contractors because there is no way of their undoing or repricing already completed business combinations.

The DCAA's inequitable interpretation of the new regulation is further exacerbated by DCAA's contention that, in a business combination, the acquired company's assets must be maintained at their previously recorded book value unless the purchase price of the acquired assets is less than their book value, in which case the acquired company's assets should be maintained at their purchase price to the acquiring company. This selective application of the purchase method of accounting, depending on whether it is advantageous to the Government, does not represent either consistent accounting or legal theory and, as such, should not be sanctioned by the Department of Defense.

The DCAA audit guidance is also unsatisfactory in addressing business combinations involving commercial entities and contractors. Under the new regulations, for example, if a contractor acquires a totally commercial entity and uses the former commercial entity's assets for Government contract purposes, the contractor can only charge asset related costs based upon the previously recorded book value of the commercial entity's assets. This is true even though the commercial entity had never before recovered depreciation or cost of facilities capital costs from the Government. There is absolutely no rationale for such a Government windfall. The August 13, 1990 DCAA guidance which provides that a contracting officer may, at his discretion, allow the acquiring company to use fair market value does not alleviate the potential windfall. Both the regulation and DCAA guidance are thus flawed in this respect.

Conclusion

There are serious and far-reaching accounting, legal and economic repercussions which are likely to result from the new regulations. They are violative of longstanding financial and Government contract cost accounting principles. The Government's new regulations will promote litigation concerning the conflict between an accounting practice which it prohibits, but which is mandated by CAS 404. They are not merely disadvantageous to contractors, but will erode the country's defense industrial base, cause potential economic dislocations and, therefore, be adverse to the long term interest of the United States. Finally, the DCAA interpretation that the regulations should be applied on a retroactive basis to business combinations which predate the regulation is without support and will cause constitutional challenges.

Mr. **Appleman**. Now, there are a lot of things that I think can be done as a result of Desert Storm. Desert Storm was a terrific advertisement for our capabilities. There are lots of people who think we make good stuff, and we do make good stuff.

There is a lot of stuff over there that they might buy. I think we could take advantage of that by, perhaps, not bringing everything back, leaving it there and selling it to the people, like the 120-millimeter tank systems.

There has been a lot of publicity about how Saudi and Egypt and several others have been interested in it. Why bring it back? Why not just leave it there, sell it to them, and buy additional stocks here? That would maintain a production base going.

I think that because of the international work and advertisement that has been done, you should ease our ability to make international sales. A law was passed in the 97th Congress at that time, and I have the reference in my testimony. At that time, it had to do with whether or not you could use government-furnished material to supply international customers. At that time, I think they were trying to protect one thing. Well, I have gone through this several times, and it becomes administratively very difficult to do.

When you are running a production line at high rates of production, and then some foreign customer wants the same thing and I am using government-furnished material, why not let me buy it? It is a good idea, but the loops and hoops that you have to jump through in order to do that are somewhat difficult in order to do it, so I would recommend somebody taking a look at that law to see whether it could be modified or not.

There is another constraint. A lot of companies are looking at down-sizing by maybe combining and forming one company out of two or three companies. Well, a recent FAR came out on this, too—it is in my testimony—which says that you cannot look at the acquisition cost and start depreciating that. You look at the book value of the company.

Well, this contradicts some of the CAS accounting standards, so on the one hand they tell you that you are supposed to do it one way, but this FAR does not permit you to do it that way, and our company in particular has had that experience, so we know whereof we speak.

So in summary, I feel there is an opportunity. The base is certainly diminishing—the record speaks for itself—but I think there are opportunities by taking advantage of what happened in Desert Storm, by easing our ability to make international sales and take advantage of that, by eliminating some of the overregulation and overauditing that we have been subjected to do, eliminate some of the adversarial relationships that exist between government and industry—not necessarily at this level. General Schumacher and I do not have any problems, but when you get down to the working level, you will always find problems in trying to get things accomplished.

So I thank you very much for this opportunity, and I stand ready to answer any questions you might have.

[The prepared statement of Mr. Appleman follows:]

PREPARED STATEMENT BY HOWARD C. APPLEMAN, PRESIDENT, ARMTEC DEFENSE PRODUCTS

Mr. Chairman and members of the subcommittee:

I very much appreciate the opportunity you have given me to appear before you to express my concerns for the situation in which the U.S. Ammunition Industrial Base now finds itself, as well as how the upcoming budget cuts will affect our capability. Obviously this could affect our Armed Forces ability to project power in the event of future armed conflict.

I find it very gratifying that this committee is devoting itself to this issue which has over the years been the subject of a great deal of study, but although recommendations have been made, they have rarely been implemented at the working level. I believe that the timing is indeed propitious since the recent dramatic events in the Persian Gulf provide an easy escape to euphoria and a reduced visibility of what may be considered serious real, and potential weaknesses in the ammunition manufacturing base of the United States. I believe we were very lucky in many ways due to the shortness of the conflict. Not only were there few lives lost, which is most important, but the ability of the base to mobilize and gear up to full production was for the most part never really tested.

My remarks here are made from the perspective of a major component supplier, basically a subcontractor in the ammunition industry.

Before getting into the details, allow me to establish my credentials. I have spent more than 43 years in the Aerospace and Defense industry, primarily in the ammunition business sector on both sides of the fence; i.e., government and industry. The first position I held following graduation was at Picatinny Arsenal now known as the Armaments Research, Development and Engineering Center (ARDEC). I spent 11 years there in engineering and management positions, principally involving the transition of ammunition systems from development into production. I was there during Korea. For the next 15 years I was employed in ordnance production management positions at Honeywell, Inc. In this position during Vietnam, I was able to evaluate the industrial base issue from a contractor's viewpoint.

Since 1980 I have been President of Armtec Defense Products Company located in Coachella, CA. We are a subsidiary of Esterline Technologies Corporation of Bellevue, WA. Armtec is a highly specialized subcontractor to the ammunition industry and is the principal supplier to the Army for combustible ordnance products used in tank, artillery and mortar ammunition. I am a member of the Board of Directors of the Los Angeles Chapter of American Defense Preparedness Association, Eisenhower Chapter of the Association of the U.S. Army, and also the Los Angeles President's Round Table, which has recently been studying this issue. Since my experience is so heavily founded in the ammunition sector of the defense industrial base, and I've held significant positions in both industry and government, I feel well qualified to comment on this aspect of the defense business.

Mr. Chairman, I am certain that I am not alone in making the observation that the U.S. Defense Industrial Base, in general, is on a downward spiral. Each year seems to offer fresh evidence of diminished capabilities. The ammunition portion of it is especially vulnerable since it really does not have a civilian industry counterpart. It is very difficult to convert from making ammunition components to civilian products. In my situation our technology is very similar to that used for making high fidelity speaker cones. However the differences in tolerances, in volume, in marketplace, etc. are so great that if we tried to enter it we would soon go out of business. So then where would this capability, this Industrial base be for our very important components?

If we are to indeed have the capability of power projection, we must have an ammunition base which permits us to adequately respond to surge requirements which might be brought on by a sharp military conflict and its urgent demands for delivering massive fire power. Maintaining this base in the face of budget cuts and force reductions as a fallout of the existing economic situation is very difficult. In order to do it, changes must be made in the way we support this base. These could be changes in procurement policies as well as the laws that dictate them.

Certainly the military history of this country, since approximately 1940, supports the requirement for a strong ammunition industrial base.

I do not intend to go through the history of World War II, Korea and Vietnam from an industrial base standpoint. However, it seems we never learn from experience. It happened every time: the war ended, we did not keep a base warm, significant suppliers left the industry, we scrambled again and eventually came through. I have seen it from both sides.

It is not possible to draw a parallel for Desert Storm because it really didn't last long enough to test our ability to mobilize. Because of the defense buildup during the 1980s there were sufficient supplies on hand, in most cases, to deploy to the Gulf and to utilize them effectively. All of these things contributed to a war which lasted a phenomenal 100 hours. This short period of intense conflict, very fortunately, did not tax our ability to surge vital ammunition production nor sustain demanding requirements over an extended period.

If we are attentive, we should learn something from Desert Storm and integrate that knowledge with the lessons that we should have learned following World War II, Korea and Vietnam. We should be able to identify steps that need to be taken to assure our ability to respond to the kinds of threats seen as most likely for the balance of this century at least, in a manner affordable to this great Nation.

So as we come off the impressive victory we won in the Persian Gulf, and examine precisely what is the status of the U.S. Ammunition Industrial Base, we might expect celebrations, but instead, find lots of gloom and doom. Yes, our ammunition worked well. This was true not only of the so-called smart weapons, but also true of the basic tank, artillery and mortar ammunition, which makes up a large percentage of the Conventional Ammunition Industrial Base of which we are all a part.

The last few years have seen a steady decline in the ammunition funding. The Army and Air Force representatives can give you the details. I can say that over the period fiscal years 1986 through 1991, there has occurred a 44 percent reduction in the Army ammunition fund and preliminary fiscal years 1992 and 1993 figures indicate a further decline. This has been paralleled by an abandonment of the market place by important, traditional contributors to the ammunition industry. One example is that the Eastman Kodak Company for years the makers of multi-option fuzes, is no longer active in the business. It is also notable that Honeywell, Inc. recently saw fit to divest its defense and ordnance related businesses resulting in the creation of Alliant Techsystems, one of our major customers. Another former customer, General Defense Corporation, was sold to Olin and has been consolidated into the Olin Ordnance Systems Division and is a major Armtec customer. The Chamberlain Corporation has recently closed one of its major production facilities in Massachusetts, while another major name in ammunition production, NI Industries, has also undergone severe downsizing. Finally I add that Ford Aerospace has also sold its ammunition production facility. Although most of this is due to lower ammunition budgets, a great deal is because of the excessive regulation and oversight we must endure.

The capabilities that in many cases are lost here are not easily recovered. Usually the driving forces that are associated with these organizations must leave to pursue work in other industries or locales. As I mentioned before, in ammunition it is not easy to convert to commercially viable products and thus maintain a capability that might be required in the future.

Much of what has been happening, of course, has been driven by the budget deficit situation that all of us in the industry recognize, particularly in light of a truly reduced, worldwide threat posed by our historic cold war adversaries. New emphasis and priorities are acknowledged.

Nevertheless, the above represents a definite erosion of the vitality of our industry and its ability to respond to the demands of any critical military situation that may confront this country. A final point about this concerns the decline in government laboratory capabilities. Certainly within the Army ammunition community, we have started to see more and more early retirements and just plain attrition undercutting the capability of the ordnance arsenal system. Since this segment of the industry works in close coordination with the private sector, the net effect is negative and alarming.

Although the industry is looking at a marketplace that is contracting due to force reduction plans, it may at least be regarded as somewhat predictable since there will be required replacement of certain stocks expended in Desert Storm. Moreover, Desert Storm could potentially create international opportunities that U.S. suppliers may be able to parlay into healthy business prospects.

In any event, the possibility exists that with reasonably good planning and recognition that our slipping capabilities in ammunition must be revitalized there are certain steps which may provide relief.

Thus I would recommend a set of strategies and actions that could be employed by the government to reverse the unfavorable trend and restore to the U.S. Ammunition Industrial Base the required ability to respond to national emergencies while minimizing the cash flow required to purchase such an insurance policy. Affected would be prime contractors such as represented here today by Mr. Catani and Mr. Allen, and sub-contractors such as Armtec.

My first recommendation would be to urge you to replenish those depleted stocks drawn down by the recent Desert Storm operations, perhaps not fully covered under the fiscal year 1991 supplement and to account for the inventories that might also be left in the Persian Gulf either as contingencies for the return of U.S. forces or with our allies who have expressed an interest in purchasing them. If Saudi Arabia, Egypt and possibly other countries in the region are planning to purchase 120mm tank systems, it does not seem cost effective to me to return ammunition to the States now only to send it back later to the Gulf. I further believe that this step is one that should be taken as soon as possible in order to take advantage of current procurement actions in fiscal year 1991 and the supplement; i.e., maintain existing production lines. Perhaps, they should be stretched out so that the lines could be kept active for a longer period of time.

My second recommendation is to provide some real assistance in the international arena. International business has become ever more important to the Industrial Base as U.S. force requirements diminish. This business helps maintain production lines and provides a direct benefit to U.S. procurement accordingly by lowering total costs. This is another instance in which action is required in a fairly short time frame, simply because the interest stimulated by Desert Storm and the awesome regard for American military equipment performance gained in the operations there, provide leverage for U.S. military contractors that should not be ignored. My personal feeling is that this does not apply only to the Persian Gulf, but to other parts of the world. There are a number of governments friendly to the United States that reside in neighborhoods that can be considered dangerous to them. It is impossible to conceive of a better time to approach these people as potential customers.

Some of the government actions that should be taken are: Modify some of the administrative restraints many companies encounter now on export sales. This is not to say we should ease licensing requirements. One example I am familiar with is when Government Furnished Material is used as a component of some of our products. It is very time consuming to obtain approval to use GFM even if we are willing to pay for it. Even small to medium size foreign orders that are in all other ways approved for export require this time consuming procedure. The present law (Pub. L. 97-392) requires the substitution of equivalent material from commercial sources. This would involve the cost of completely shutting down the domestic production line while running the foreign order through the factory, not a cost effective approach for either customer.

This situation is addressed partially with Public Law 97-392 and I suggest that it be reviewed and implementation policies be modified with an eye toward easing the problem for contractors.

An analogous situation is the use of government furnished equipment for foreign orders. It is relatively easy to promptly obtain such permission. A revision to the public law facilitating the use of GFM would help export-minded U.S. producers compete in international markets.

Another recommendation concerns CICA (Competition in Contracting Act).

I recognize that there is a requirement for competition and you can afford it when there are large requirements and many qualified suppliers of a product.

At this time the requirements are low and there are just a few qualified suppliers, and sometimes only one qualified supplier, left in the base. The Army has, in some instances, recognized this and has approached the situation with a declaration that it intends to reduce dual sourcing in situations where competition does not make sense. We endorse this approach, and encourage it to be applied on a much broader basis.

Competition simply for competition's sake has frequently led to far more cost, waste, and delay than it was designed to eliminate. Perhaps we should adopt the method used overseas wherein suppliers are qualified and then become a permanent member of the program team. In effect procurements are then directed to them. I realize this would require changing some existing laws and policies but I think it would be well worth it in many instances.

A counter argument to anything less than competitive procurement has always been that this approach leads to sole sources with accompanying increased prices.

We do not buy that argument. Armtec, for example, has in a number of cases, been the sole supplier in our business of combustible ordnance. Even in this situation we have been able consistently to bring down prices based upon increased efficiencies. Only when substantial program cutbacks cause increased overhead rates, have we shown price increases. Frankly, a lot of money was spent in trying to establish a second source, but in the main those efforts were not successful. It really was competition for competition's sake, not the real intent of CICA.

Another supporting point to this is that multiyear procurement is a good approach where possible. When the government is able to look ahead 2 or more years and define its requirement, it is entitled to a better price. Contractors are able to negotiate long term delivery contracts from their suppliers and management can simply do a much better planning job that allows more predictable utilization of resources. Consequently, lower costs are passed on to the government. Thus we encourage multiyear procurement. At this time multiyear contracts are few and far between and are all virtually at the major system level. They could and should be implemented at lower levels; i.e., subsystems and even subcontractors.

A related point has to do with transition from development to first year production. We believe it is a mistake to attempt moving production from the developer to another supplier the first year. We feel that the product quality and schedule almost invariably suffer in this kind of situation. Again, I recommend picking team members early on and sticking with them.

My fourth recommendation has to do with the avoidance of implementing policies adverse to practical business management. One example of this is a recent Federal Acquisition Regulation, FAR 31.205-52, that dictates when a company is purchased and its assets written up to reflect current economic conditions, as is required by accepted accounting principles, the government will not allow these costs to be recovered by the purchasing company. In attempting to cure a perceived problem here, the government is deciding to deny any company purchasing a defense contractor the ability to recoup its investment. In effect, the value of assets is being determined by regulation and not by the market place.

This is sure to turn off potential investors and is particularly onerous in interpreting the regulation to apply retroactively to business combinations made in prior years. This would cause companies that were purchased under one set of regulations to be adversely affected by implementation of a set of regulations applied after the fact. This boils down to confiscation of assets without due process.

I speak with some personal experience on this point, since our own company recently was purchased and we have been unfavorably affected under the regulations. Several trade associations are working to have this regulation withdrawn, but for the moment at least, it remains a bone in the throat of the defense industry. Congress should see that this rule is overturned.

Another policy which should be reviewed very carefully is that of demanding lowest price where, in fact, best value is the real objective. We are starting to see some attention being paid to this but we urge you to make sure that the bureaucracy recognizes the differences and in fact takes steps to assure evaluation for best value not lowest price. Here the problem is getting the message down to the working level.

Mr. Chairman and members, I now wish to summarize my remarks.

— I believe that the U.S. ammunition base is a critical asset supporting the power projection needs of the United States. I also believe that we are still having trouble understanding the lessons of World War II, Korea, and Vietnam concerning keeping warm certain necessary and vital ammunition prime and subcontract suppliers; i.e., the Ammunition Industrial Base.

One hundred hours of Desert Storm is the exception in the American combat experience. The next episode could very well challenge our ability to surge and sustain critical ammunition production.

— The industry now finds itself facing a very difficult situation where budget considerations and inappropriate procurement policies shape the ammunition program rather than any likely threat. Unfortunately, this is resulting in an industry-wide shake-out with numerous flagship companies divesting or closing. The same pressures are bringing about the reduction of capability in the Army arsenal system and this is equally alarming.

— There are several recommendations which if properly received and supported by the government will contribute to preservation of the Ammunition Industrial Base.

— I urge you to support immediate rebuilding of conventional ammunition stocks depleted in the recent Desert Storm operation and yet not planned for replenishment through the supplemental appropriation of fiscal year 1991. Those inventories, to be left in the Persian Gulf, should be accounted for by procurement actions as appropriate.

— An active production base for critical ammunition items must be established and supported with minimal production rates, if necessary. Vital subcontractors as well as primes must be covered.

— I recommend you review administrative controls apart from export licensing which could be modified to ease the plight of firms working to improve their international market penetration.

— Finally, I urge you to support modifications to the procurement laws which now engender overregulation and excessive oversight of this vital industry. Also I recommend you support modifications of the procurement laws to enable the government and its prime contractors to solicit business without competition. Candidates for such treatment would be only those companies who have proven themselves over the years and who have been and wish to continue as part of the Ammunition Industry Mobilization Base.

Gentlemen, thank you very much for your attention and for the privilege of addressing you with my views.

Senator DIXON. Thank you very much, Mr. Appleman. You all have made some very fine remarks.

Mr. Catani said something that struck me as interesting, which has been an observation that I have made from time to time. He pointed out the immense cut in the ammo budget with reference to what is done generally in the Department of Defense budget over the years.

I came here in the 1980 elections, which I remember very well. The issue then, of course, was whether we were going to do something to make a major investment in our readiness and sustainability and other capabilities with respect to our defense system in the country, and it grew and grew and grew, over the years that I have been in the Senate. I supported all of that.

Then it began to flatten out, and last year, for the first time, there was an actual reduction. I think we went from $305 million to $289 million, my figures could be off a million or two either way, but roughly, it was the first time we had a cut.

Now, that is exclusive of the Desert Storm experience, because when you put in all of that supplemental money and everything again, why, of course, there is an increase again, so it really might not be entirely true, even there. But the fact is that there has never been, really, much of a cut, actually. It has been a leveling off.

But when you look at those ammo charts my friends the generals put on the board, anything we have here, you see these dramatic declines, very dramatic declines. I think you said, cut in half. Is that substantially true?

Mr. CATANI. More than half, sir.

Senator DIXON. I could be in error, but I do not know of any other—no, that is not the one I was really looking for. Let me see if I can find it. [Pause.]

You see this immense drop here causes me to speculate about when we were wrong—the first time, or now. Obviously we are not buying the amount of ammo that we were buying some years ago. It is substantially less. I wonder what you gentlemen might say about that?

Mr. CATANI. The ammunition that we were procuring 4 to 5 years ago was ammunition that we were putting into a stockpile condition. How much of that from a relationship of training versus combat that has been utilized to date I cannot answer. Our military customers have to answer that.

What I can answer to is the fact that at the present levels of procurement the viability of the business is no longer there. Therefore, that business must shut down. It must, of necessity, get out, because there is no ammunition to buy. Therefore, if it is a capacity issue, and we must in fact reduce our capacity, I can understand that.

But when it comes to capability, I do not think this country can afford to reduce its capability to nothing. That is the concern that we presently have. We must maintain the industrial base capability to respond, and if these businesses go down, that capability disappears.

Senator DIXON. Thank you. Mr. Appleman.

Mr. APPLEMAN. Sir, along those lines, it is true that the amount of money available is going down, but what works against you—and it was mentioned before by Dick—is CICA. CICA—I call it competition for competition's sake, and that is what really happens. Even though the law was not written—in actual practice, that is what has happened.

I really think that what you ought to do is change the laws and do like they do overseas. Pick a supplier and stick with them during this period of time. Competition is getting you nothing, really. Competition is forcing a lot of people out of the business.

There are a lot of companies—NI, for example, comes to mind. It is out in California. This is a company that has been in business for many, many years. It has a good history. They competed on a lot of things. They lost. Okay. They are seriously thinking of going out of the business. This is a company, as I say, that has been in the business for years. I really think somebody ought to take a serious look at changing the laws as to how we do business. I do not think competition really buys you that much.

I have been in an unusual situation in that the things I make are not really competed. I have been lucky, you might say. There were lots of attempts over the years to establish a second source. In most cases they failed. A lot of money was spent in trying to do it.

If you look at the price the government and my customers have paid for my products, you will see very nice curves, going down—very respectable curves. So the argument that competition means the prices go up really does not hold true, and I am willing to expose these prices to anybody. I have. I have made presentations to a lot of people about that, and I am sure there are many other cases like this in our industry.

Senator DIXON. Mr. Allen, do you have a comment?

Mr. ALLEN. I concur pretty much with what Howard has said with regard to competition for competition's sake. Many times we have created competition for quantities that do not justify the one source, let alone a second source, and as a result of doing that we are spending significant additional moneys both creating the second source—but these dollars do not show up, because they are part of that O&M account that I talked about and not part of the direct dollars that you see in the other budgets.

I think that our problem has got to be addressed, and we have got to eliminate that paper and get it back to the product. We cannot afford to continually reduce and reduce and reduce without providing that product.

I think the people that understand and know this much better than those of us sitting right here today are probably the two gentlemen sitting behind me here, because they are the ones that have that responsibility in the event that we do have some type of a war. God forbid that we never have one again, but we need to provide them the product. All of this paper that we keep creating, they cannot fight with that.

Senator DIXON. I hear what you gentlemen are saying, I would just return to the final point that I made before as well. We have all of these expensive systems now. The one announced yesterday—$665 billion; 650 airplanes at a $100 million apiece. Math was not my strong suit in college.

But it occurs to me that we do these things—which is fine. Many of us supported it—and cut ammo, and we saved $500,000 here and $1 million there. I am really concerned about the fact that we are not going to have an ammunition production base when we are finished with all of this.

I see you gentlemen nodding your heads yes, and I heard the generals before. I continue to raise this in my subcommittee and in the committee when it meets, and on the floor of the Senate. I suppose some people are listening. I hope we do not find, sometime, that we do not have the necessary ammunition with all of this fancy stuff that we have out there.

What specific steps would the three of you like to see the Defense Department take to ensure a responsive industrial base? What do you think we ought to do?

Mr. CATANI. I think there should be a plan formulated that consists of people from the military, industry, and Congress. There must be a plan whereby what we are presently trying to maintain as a base is too much. We have a basement and an attic syndrome.

If we were to look at what we are trying to maintain now, both in munitions and ordnance and in GOCO's, we are probably trying to maintain things that we would never fire in anger in a future war. We should shrink down what we really need, and the only people that can do that, in my estimation, are our customers. They are the ones who know tactics. We should leave that business to them.

Industry should supply the weapons for the tactics based on what they need, and that should be supported and overseen financially and from a management standpoint by Congress, and if the three of us can get together, formulate such a plan to find out what is critical for the national security of this country and maintain it and put the funds in and keep it.

Senator DIXON. Mr. Allen or Mr. Appleman, either one.

Mr. ALLEN. I think one place we have to start is with the procurement policies and procedures. They have to be changed. We have to be able to place defense contracts where they can do the best good for the American public as well as the military. We have got to change procurement practices.

Again, I commented earlier on the Arsenal Act and GOCO's. You know, we are not against GOCO's, but we want to be up front about it. Let us try not to compete them if we are going to compete them with out-of-pocket costs against private industry. Stick to the acquisition plans that are originally established, and do not change the plan half-way through the acquisition cycle and take some planned production away from the developing companies.

I believe a conclusion to be drawn from the recent events is that developing and sustaining the technology base is more important than building the broad potential manufacturing base for an extended conflict right now. A deep surge capability at start of hostilities will not be a deciding factor in another short war like we have had in the past. It does not mean that we should not maintain that capability, however.

A technology base composed of high quality developer producers with the capability of contributing to and advancing the state of the art of the ammunition funded through the available ammunition budget is the only solution, I believe, to the demanding future presented by decreasing budgets.

I heard earlier in the testimony that there have been decisions relative to the deactivating of several GOCO's. However, at the same time, I also understand—and this was also stated—that they are making plans to use facility contracts to keep them available for mobilization.

Fine, but to share the costs with industry, I think we have created ourselves another problem by providing rent-free use for government work, low overhead costs based upon the zero-based concept which is being proposed, and less government restrictions and controls. I would love to have it. The fact that it will also be available for commercial work, I would also like that. I would like indemnification for U.S. Government work when we use hazardous materials.

I would like this one especially—indemnification from the EPA for all U.S. Government work that I am performing—and I believe that once again, all we are doing is creating more unfair competition with the private sector through government subsidies, and I do not think that is the original intent of what we want to do.

Senator DIXON. Thank you. Mr. Appleman.

Mr. APPLEMAN. Yes. I think we have to look at this as being a new world, in terms of procurement. There is no money around. Let us face it. You might want to do all you want to do when the budget situation is such that you cannot do it.

I think what Angelo—when he said that Congress ought to be involved, I think that is very true. I get together with the Army types. They say, well, we cannot do anything else. The law says this is the way we have to do it. Now, maybe that is not the way the law was intended to do it, but in actual practice that is what happens, and maybe that does not get fed back to you and your colleagues in such a way as you can take action.

I have run into cases—and the one I mentioned before, where the people I talk to say, well, that means changing the law, and you know, we cannot do that. Well, I think we can do that, if it really comes down to maintaining our base.

So I would second Angelo's motion, and I think you should have some kind of a committee put together of industry, government, and congressional representatives—staffers or whatever—to look at this problem and come up with some recommendations along these lines. Things have to be done differently.

When I talked to one Congressman once about changing CICA, I said to him, do you think it has any chance of passing? Oh, no, no, no. That is apple pie and motherhood. You know, you cannot do anything about it. Well, maybe you can do something about it, and maybe we have reached the point now where we have got to do something about things like CICA.

Senator DIXON. I want to thank you gentlemen. Now, if we could have everyone please clear the room, we are going to the classified session with General Schumacher and General Hopp. We appreciate it very much.

[Whereupon, at 3:18 p.m., the subcommittee proceeded in Executive Session.]

EXECUTIVE SESSION

The subcommittee met, pursuant to notice, at 3:20 p.m. in room SR-222, Russell Senate Office Building, Senator Alan J. Dixon, chairman of the subcommittee, presiding.

Committee members present: Senators Dixon and Lott.

Professional staff members present: David S. Lyles.

Minority staff members present: Ronald P. Kelly and George W. Lauffer, professional staff members.

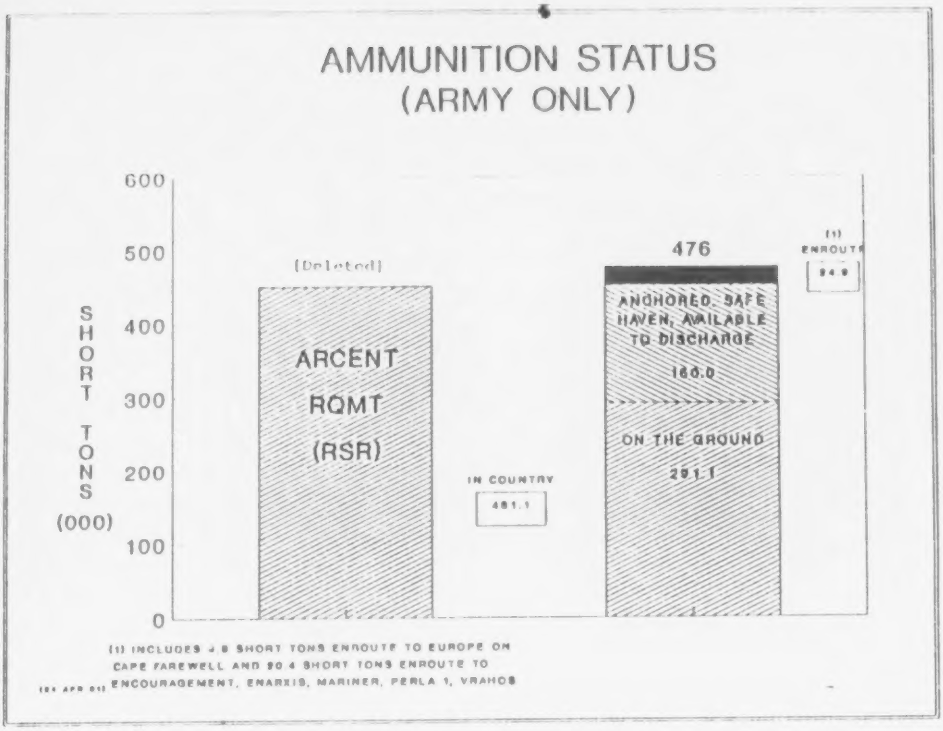
Staff assistant present: Mary J. Kampo.

Committee members' assistants present: Charles C. Smith, assistant to Senator Dixon; Samuel D. Adcock, assistant to Senator Lott; and Gary D. Reese, assistant to Senator Johnston.

Senator DIXON. Generals Schumacher and Hopp, we are in closed session now. I would like for each of you to briefly summarize: first, your ammunition consumption during Operation Desert Storm; second, how this 2-year budget and the Future Year Defense Program affect your conventional ammunition sustainability posture.

STATEMENT OF BRIG. GEN. WILLIAM J. SCHUMACHER, USA, DEPUTY FOR AMMUNITION, DEPARTMENT OF THE ARMY

General SCHUMACHER. Sir, first I would like to discuss the Desert Shield/Desert Storm operation.



AMMUNITION STATUS
(ARMY ONLY)

(1) INCLUDES 4.5 SHORT TONS ENROUTE TO EUROPE ON CAPE FAREWELL AND 20.4 SHORT TONS ENROUTE TO ENCOURAGEMENT, ENARXIS, MARINER, PERLA 1, VRAHOS

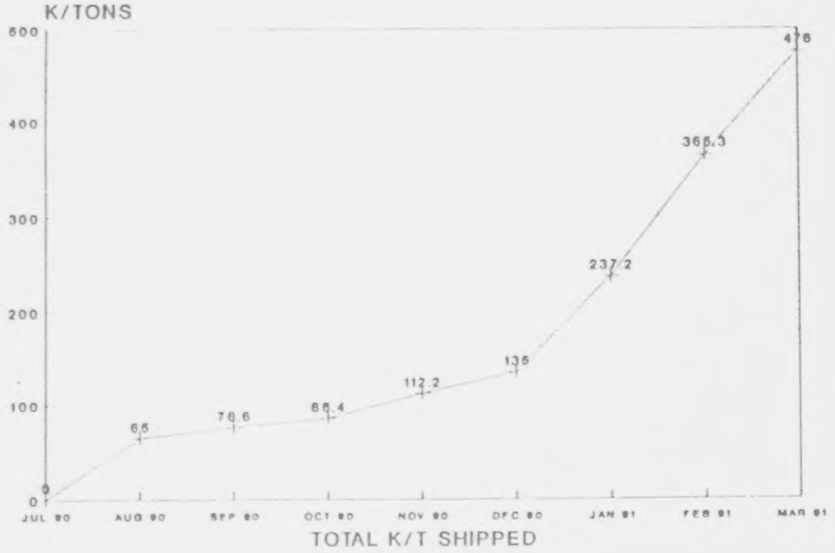
(24 APR 91)

General SCHUMACHER. Sir, during the Desert Shield period of time, we shipped over 476,000 short tons of Army ammunition to that area. When the war ended, we had 291,000 on the ground in Southwest Asia, and 160,000 sitting on the ships, either anchored or in safe haven. Those are on the way back. All but two have returned to their originating ports.

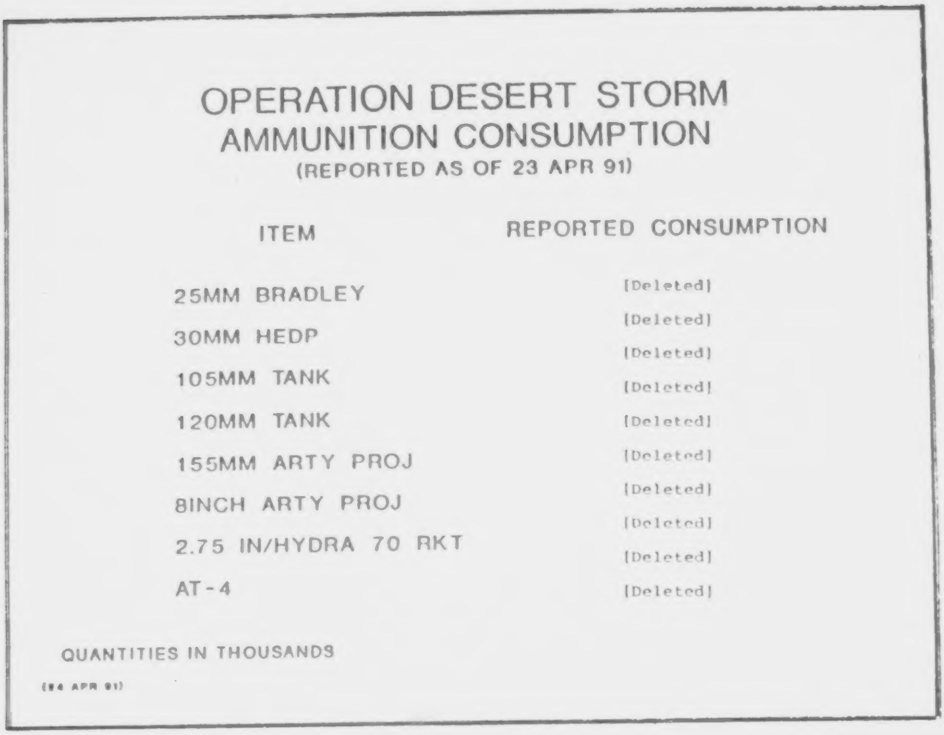
Senator DIXON. All but two?

General SCHUMACHER. Two of the ships are still on the water. So we are now faced with bringing back a significant portion of that 290,000 short tons, which will take us a few months to do, since it took us quite a while to get it over there.

TOTAL ARMY TONNAGE SHIPPED TO SWA



The next chart shows the tonnage that we shipped by month. You can see that we shipped ammunition over there at rates that we had never experienced before. As the tempo picked up, you will see, starting in December, that the quantities we shipped averaged over 100,000 short tons per month.



OPERATION DESERT STORM
AMMUNITION CONSUMPTION
(REPORTED AS OF 23 APR 91)

ITEM	REPORTED CONSUMPTION
25MM BRADLEY	[Deleted]
30MM HEDP	[Deleted]
105MM TANK	[Deleted]
120MM TANK	[Deleted]
155MM ARTY PROJ	[Deleted]
8INCH ARTY PROJ	[Deleted]
2.75 IN/HYDRA 70 RKT	[Deleted]
AT-4	[Deleted]
	[Deleted]
	[Deleted]

QUANTITIES IN THOUSANDS

(24 APR 91)

Now, in terms of the Army consumption, the next chart shows you the quantities that have been reported so far. I have to tell you that the data is incomplete. All units have not reported in terms of what they used in combat.

We expect a better answer to that question within 6 months.

Now, in addition to the combat expenditure at the end of 6 months, we will have collected data that shows what they used in terms of training and what ammunition was either unserviceable or uneconomically repairable, due either to handling or to the environment over there. In my view, it will take us 6 months to really get our arms around determining how much is over there that is serviceable and usable.

So I will not have a really good handle or good number on how much totally was used—training, combat, and set-aside—in terms of unserviceable—for several months.

But, as you can see, the quantities there are not excessive in terms of what we had.

Senator DIXON. No. I'm surprised that the numbers are not as high as I had thought they would be, frankly.

General SCHUMACHER. Yes. To be very honest with you, that is probably 40 percent to 50 percent of the units that have reported.

So you might, as a rule of thumb, double that. But I do know there are also items that we used in training that I don't have a full accountability of yet.

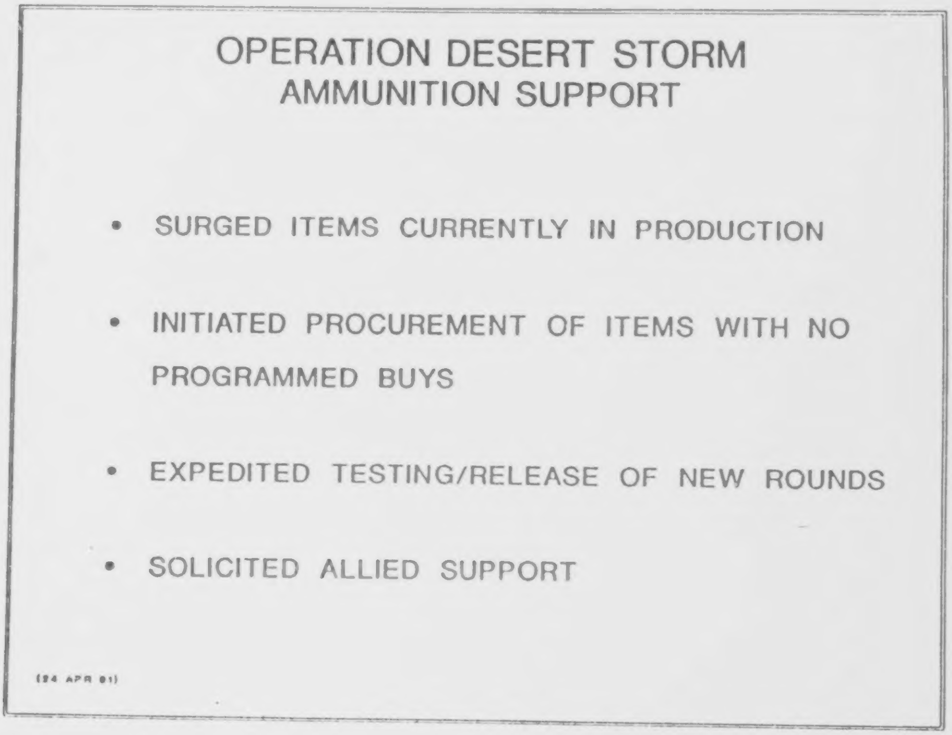
Senator DIXON. That would constitute what percentage of what you sent over there? Could you give me a rough shot at that? It is pretty small, isn't it?

General **Schumacher**. Yes, sir. I would say it probably represents about 20,000 short tons.

Senator **Dixon**. And you had 490,000?

General **Schumacher**. I believe the figure is 476,000.

Senator **Dixon**. Well, I won't try to do my math. But I will just say that it is a very small percentage.



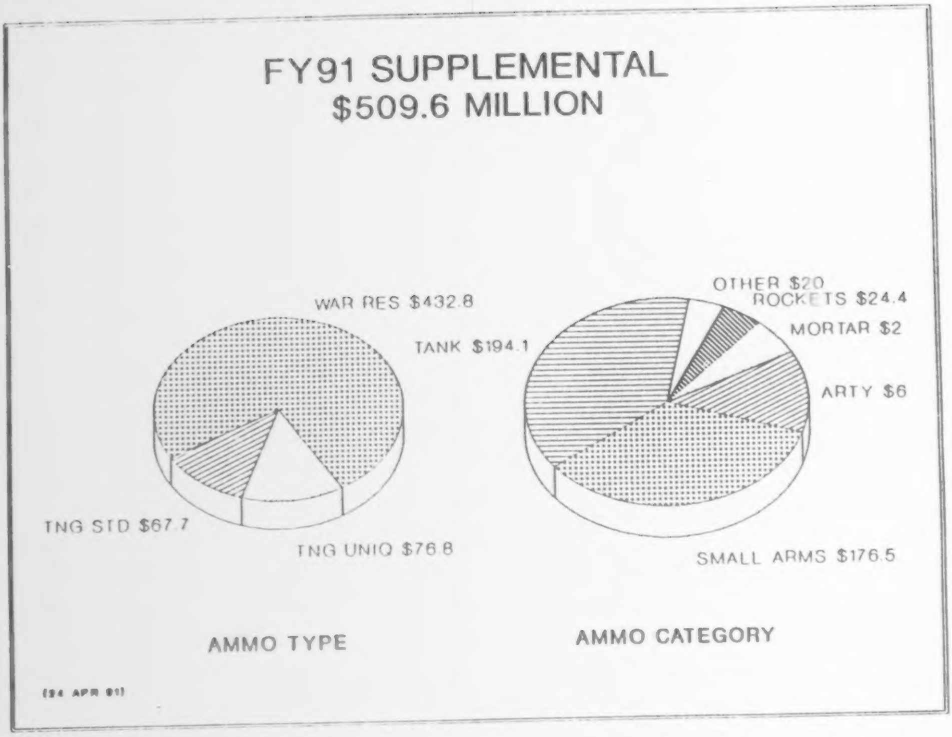
OPERATION DESERT STORM
AMMUNITION SUPPORT

- SURGED ITEMS CURRENTLY IN PRODUCTION
- INITIATED PROCUREMENT OF ITEMS WITH NO PROGRAMMED BUYS
- EXPEDITED TESTING/RELEASE OF NEW ROUNDS
- SOLICITED ALLIED SUPPORT

(24 APR 91)

General **Schumacher**. Sir, during the Desert Shield period of time, it was, needless to say, a very challenging time. As was pointed out by at least one of the industry representatives, we did surge several items that were in production. In another area, we had no production of a particular item, and we went out and procured that from two contractors, one of which is here today.

In addition, we had several items that were nearing completion of the development cycle. We expedited the testing of a 105mm tank round and 155mm artillery round, and we were able to get some of those rounds over to Southwest Asia. We also looked to our allies for support in terms of any ammunition that we might need.



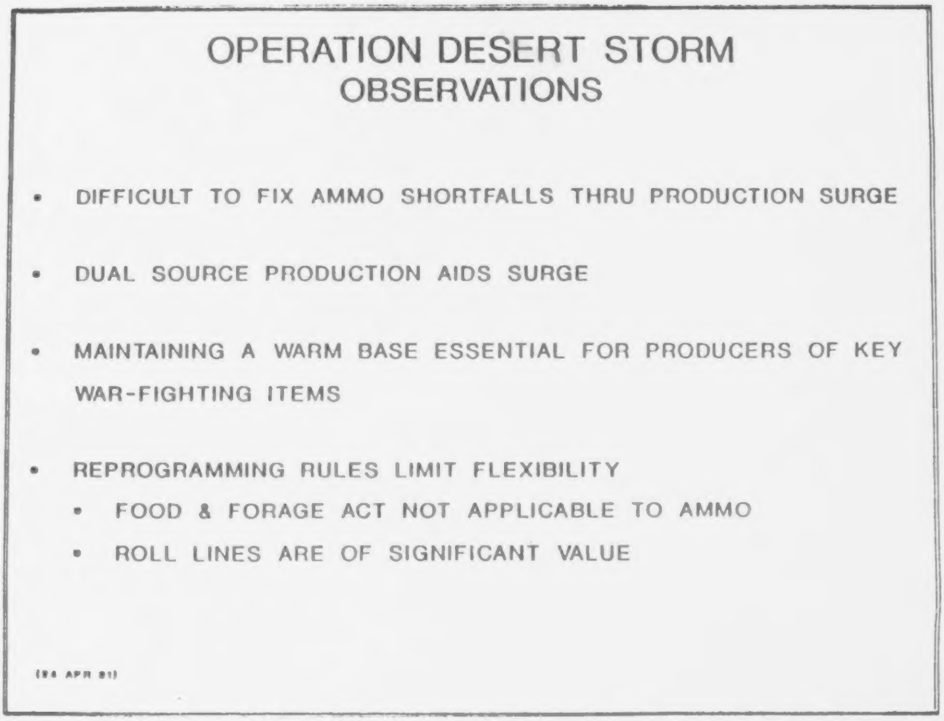
FY91 SUPPLEMENTAL
$509.6 MILLION

(24 APR 91)

The next chart, sir, shows the breakout of the supplemental appropriation.

On the left, it shows you the types of ammunition, the blue reflecting our war reserve requirements and the red and white either training standard or training unique.

The chart on the right shows you a breakout in terms of the type of ammunition. For example, the blue on the left shows that we are going to be replacing a considerable amount of both war reserve and training ammunition for the tank program.



OPERATION DESERT STORM
OBSERVATIONS

- DIFFICULT TO FIX AMMO SHORTFALLS THRU PRODUCTION SURGE
- DUAL SOURCE PRODUCTION AIDS SURGE
- MAINTAINING A WARM BASE ESSENTIAL FOR PRODUCERS OF KEY WAR-FIGHTING ITEMS
- REPROGRAMMING RULES LIMIT FLEXIBILITY
  - FOOD & FORAGE ACT NOT APPLICABLE TO AMMO
  - ROLL LINES ARE OF SIGNIFICANT VALUE

(24 APR 91)

Sir, as I looked back over that period of time, I put together some of what I would call observations.

The first one is that, in my view, it is very, very difficult to fix ammunition shortfalls through production surges. If you do not have a reasonable quantity on hand, attempting to go to the industrial base, even with a Desert Shield type operation, you just cannot achieve that.

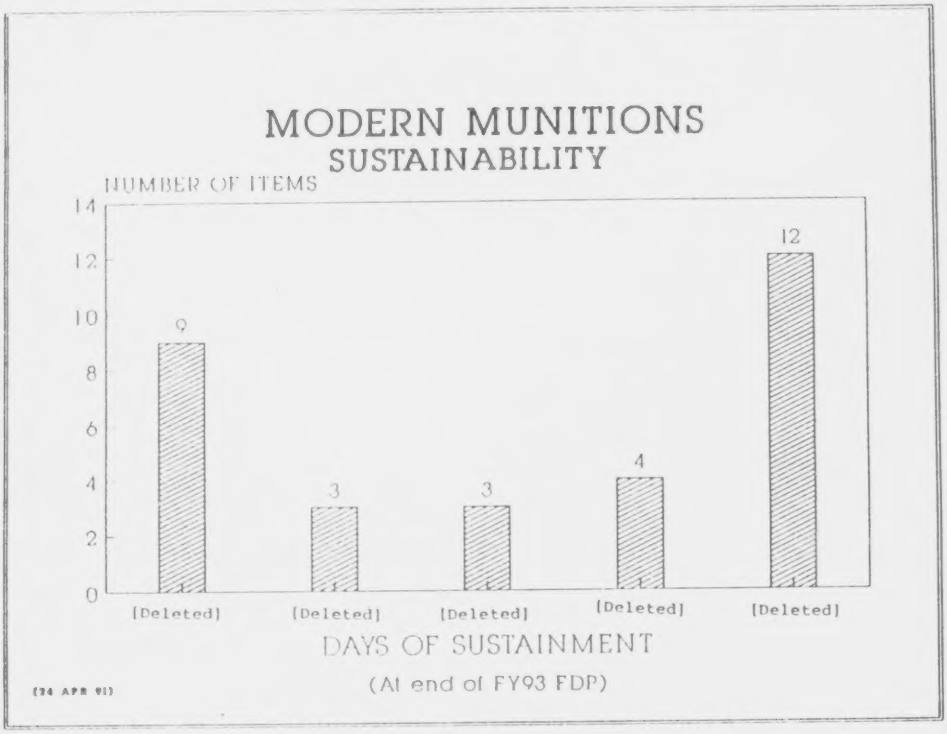
Certainly if you have two sources, that aids in surging what you have, and, again, Olin Corporation was one of those producers where I had for tank ammunition two producers that I could, in fact, surge. That helps.

To be very honest with you, I see us going away from dual source because of where the budget is.

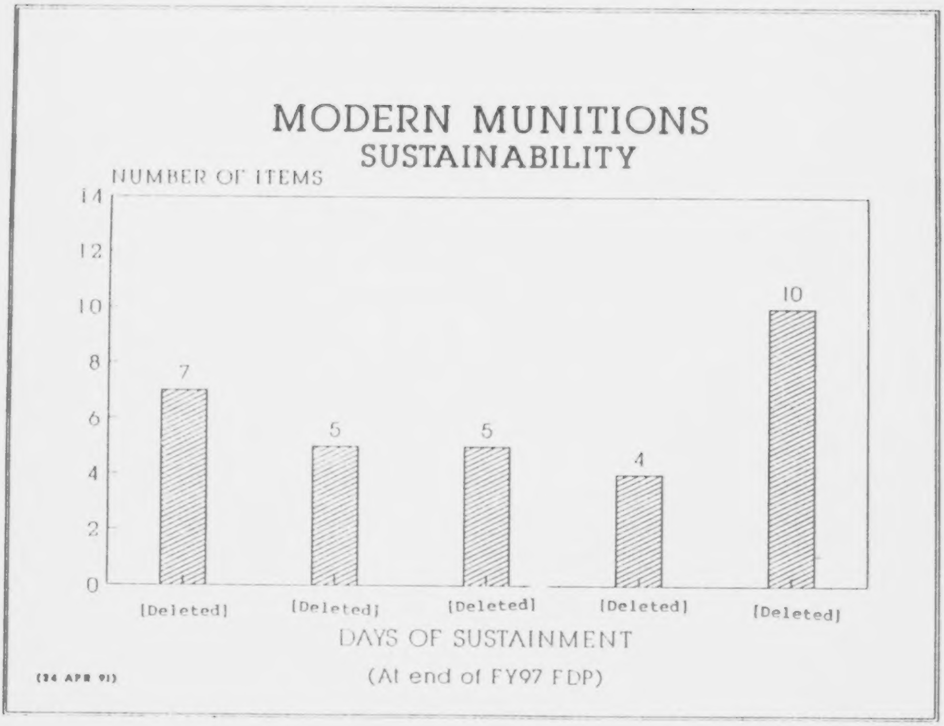
Third, you need to maintain a warm production base for the critical war fighters, such as Bradley ammunition and ammunition for the M1A1 tank. In my view, they do not necessarily have to be producing that item. But they have to be there and have the talent and the equipment to make the war reserve item if you need it in a hurry.

As I worked to make sure I had sufficient funds for the contracting agency, two things came to mind. One is that the Food and Forage Act does not apply to ammunition. And so, I was limited to the normal peacetime reprogramming of thresholds for those programs, such as tank ammunition, in terms of what I could put on a program line.

The one benefit I did have is that we have what is called a roll line where, within a particular item—and in this case the 25mm is a good example—I had several programs within that roll line and I was able to adjust the funding between programs. That, in my view, saved us on the 25mm, because I was able to divert money from one program and go to Alliant and to Olin and procure a different item in the 25mm roll line that had not been in production. It worked extremely well for us.



Looking next at sustainability of our modern munitions, I have selected what I would call 31 of our more "modern" lethal ammunition rounds. This chart portrays for the end of the fiscal year 1993 funded delivery period where we will stand in terms of days of sustainability. It shows that, of that 31, 9 items will be in the range of [deleted] days, and only 12 items will be at [deleted] days. [Deleted] by the way, sir, is our desired level of sustainability for these modern munitions.



I then took that data and looked at what our programmed buys would obtain for us through the fiscal year 1997 funded delivery period. In this case, we do a little better on the left side. We will have 7 items in the [deleted] category versus at the end of fiscal year 1993. But over on the [deleted] category, we, in fact, will have a reduction from 12 to 10 items. Two of the items will be drawn down for training and some testing. So I will have two that will drop down below the [deleted] day requirement, and we'll have to procure these to meet our desired sustainability.

Senator **Dixon**. May I interrupt you at that point?

General **Schumacher**. Yes, sir.

Senator **Dixon**. I am never able to talk about this because you can only talk about it in a classified session. So I am delighted to talk about it now.

We had these big hearings. We had my good friend, the Secretary of Defense, and the Chairman of the Joint Chiefs at a major hearing—I guess it was right after Desert Storm—and I wanted to go into this, but I don't know how to ask these questions when you can't go into the [deleted] day feature of it.

I guess that's very classified, is it not?

General **Schumacher**. Yes, sir.

Senator **Dixon**. At least I am always told that I cannot talk about this publicly.

General **Schumacher**. Yes, sir, days of supply.

Senator **Dixon**. Now you see, here is what bothers me. I just want to say this to you candidly while I have an opportunity.

There you've got 12, 21, 31 items there on that chart—is that right?

General SCHUMACHER. Yes, sir.

Senator DIXON. Ten of those 31 meet the [deleted] day test.

General SCHUMACHER. That is correct, sir.

Senator DIXON. That means that two-thirds of our stuff does not meet the [deleted] day test?

General SCHUMACHER. Yes, sir.

Senator DIXON. I am glad to see the ranking member here because I think he has some concerns about this as well.

I have always argued that for a matter that does not involve this much money—and I understand that money is money, so please do not misinterpret what I am about to say—but why don't we bring everything up to [deleted] days at least?

I mean, we had a short war, so everybody says everything is fine. I understand that. But what if it had not been a short war?

General SCHUMACHER. Sir, unfortunately in my view, that is a significant bill in terms of what you would have to pay to do that quickly.

Senator DIXON. I don't know how much that is. Could I ask you how much that is? Give me a ballpark figure, at least.

General SCHUMACHER. Yes, sir. The last time we looked at it, it was close to [deleted], sir.

Now, you also need to temper this.

Senator DIXON. Now [deleted] is a lot of money. But nobody has any problems with asking for $65 million for a new air plane.

But it just seems to me that a [deleted] day supply of the necessary ammo is not an unreasonable request of the people of this country.

I believe if you could go out there and talk to people about that, they would be shocked to know that in two-thirds of the categories on ammo, we don't have a [deleted] day supply.

Now, I can't talk about it publicly so I don't know how you debate that issue.

But, you know, it does bother me a lot. The thing I keep saying is the sad part about this subcommittee, which I find very satisfactory work, is so much of it is the mundane stuff—you know, "dumb" ammo, depot maintenance. I can go home and see eyes glaze over in 15 seconds when I'm talking about ammo—you'll get a hell of a fight discussing the B-2 in any town hall meeting—but people will leave the room when you start talking about "dumb" ammo and depot maintenance. I would like to see you fight a war without it.

General SCHUMACHER. Sir, because of some of the criticism from industry, I did a little study, and I looked at the ammo budget versus the overall Army's RDA budget, that is, research, development and acquisition budget. In fact, the Army ammunition budget as a percent of the total RDA budget is basically remaining level. It certainly is not going up. But the problem, as I see it, is that the overall RDA budget is going down. There are certainly good reasons for that and I support those. But I cannot say that the ammunition budget is not getting its fair share of the Army's research, development and acquisition dollars, particularly in procurement.

Senator LOTT. Excuse me for making this point, but there was a double negative, I think, and I want to be sure I understand what you were saying.

Were you saying that you feel like you are getting your share of the declining overall number?

General SCHUMACHER. Yes, sir.

If I put my Army ammunition hat on and tried to determine whether I were getting my fair share of the Army's procurement budget, the answer is yes. If I go back and look at what has been given to the Army in terms of procurement dollars for ammunition and what it will get in the 1992–1993 timeframe, percentage-wise we remain constant, at roughly 15 percent to 16 percent of the overall budget.

Senator LOTT. But whether or not that is adequate is a whole different question?

General SCHUMACHER. Yes, sir.

All I am saying, sir, is that there are other forces driving this issue, in my view. It isn't that the Army is zeroing in on the ammunition procurement budget to "solve a problem somewhere else." There are several reasons. One is the threat going down and one is the affordability overall, in terms of how many dollars you can place in our procurement budget.

Senator DIXON. I don't know how in the world you can debate this in a public place in view of the classified characteristics of the whole discussion. But here we have a situation. My colleague just experienced his hit last year in Mississippi. There is supposed to be another hit in my State at Rock Island Arsenal. In the open session, we had several private, for-profit manufacturers here testifying about what they are going to have to do. One of them is in my State, in Marion, IL. I have been down there and have seen it. I know what's going to happen to them if they don't sell enough ammo this year. They'll have to close it.

Everybody is in business I think to make a profit. At least it used to be that way in this country. I hope it still is. That's what's happening.

So you have the stuff that we maintain as a government going away. Now you have the private manufacturers going out of business. You've got charts like that which you're showing us.

I hope you understand that I'm not picking on you guys because you'd probably like to buy all you can buy. But you have charts like that (indicating) which show that on two-thirds of our ammo buys we don't meet a [deleted] day requirement to fight a war.

Now, I am happy with a short war. But if we ever have a quick, bad war somewhere and all these plants are closed and we don't have [deleted] day supplies—well, I guess God takes care of it somehow, and always has. But it sure does bother me a lot.

General SCHUMACHER. Sir, if you leave the dollars fixed at roughly $1 billion, what the decision-makers within the Army are faced with, in my view, is supporting training ammunition or supporting war reserves. As I mentioned in my open testimony, you will notice that we have been focusing more and more on procuring training ammunition and offsetting it in the war reserve area.

In my view, in Desert Shield and Desert Storm, having the troops trained and ready to go, was essential. I would hate to see us flip-flop that and try to buy more war reserve and not support the training activities.

Senator DIXON. Oh, I am not arguing that point at all. I agree with your thoroughly there. You are talking to a man who truly believes in flying all the hours, steaming all the hours, and firing all the rounds. You are talking to the guy that invented that theme. I agree with you 1,000 percent.

I am speaking here for both sides of the equation.

Here is what bothers me. I don't know how you go out there and argue this in view of the classified characteristics of it. I have to believe that the country believes we are right about that part.

While I have every respect for the amount of money involved and I do not denigrate [deleted]. I think when you are arguing all of the windshield sticker prices of some of the things we are buying, to come back to the mundane question of having the ammo, the rounds to fire out of all this stuff is a pretty decent case to make before the American people.

You can have the finest tanks, the finest artillery pieces, the finest mortar pieces, the finest hand-guns, the finest weapons of every kind—airplanes, ships, you name it—but if you don't have the ammunition to shoot out of them, they ain't worth nothing.

General SCHUMACHER. Yes, sir.

Sir, to be fair to the people that would not agree with you or me, there are two things that I would pass on to you that they would challenge on my charts.

Probably the column on the left is driven up by the fact that these are new items where we are just beginning production. So it will take a while to bring a contractor up to the desired production rate.

The other area is this. This chart shows one of the new tank rounds, and the ones we fired in Southwest Asia that worked superbly was an older model. We have basically a [deleted] day supply of the older round. So the chart deals with the latest rounds, and one could challenge me that I have not shown the older rounds that are available there to fight a war.

Senator DIXON. Well, I can see that. Probably most of our old rounds are better than anything that anybody else has, based on what I have seen. So I am not too troubled by that. Our old stuff is probably better than most of the modern stuff that the other armies of the world have.

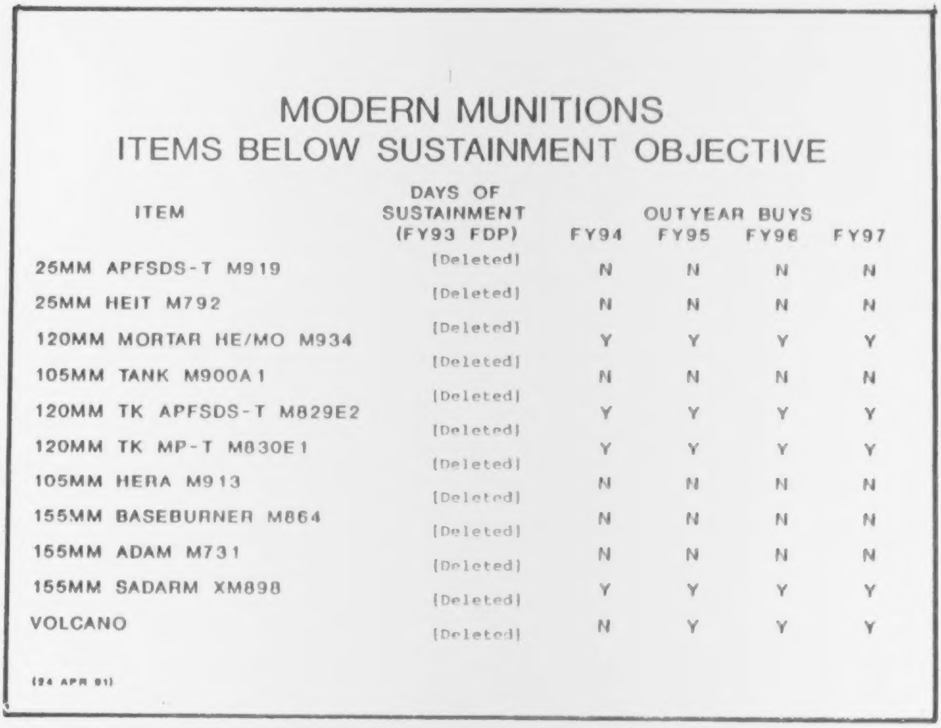
I hear that, too.

General Hopp, I didn't mean to cut you off, sir.

Excuse me, General Schumacher, had you concluded?

General SCHUMACHER. No, sir. I have just two more charts.

Senator DIXON. Please continue.

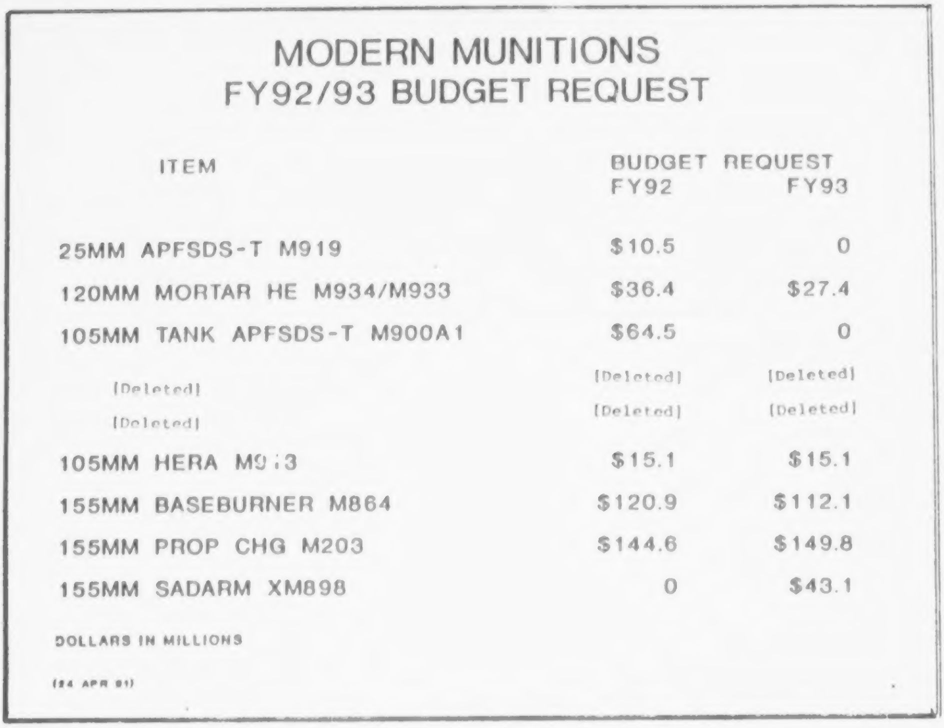


MODERN MUNITIONS
ITEMS BELOW SUSTAINMENT OBJECTIVE

ITEM	DAYS OF SUSTAINMENT (FY93 FDP)	OUTYEAR BUYS FY94	FY95	FY96	FY97
25MM APFSDS-T M919	[Deleted]	N	N	N	N
25MM HEIT M792	[Deleted]	N	N	N	N
120MM MORTAR HE/MO M934	[Deleted]	Y	Y	Y	Y
105MM TANK M900A1	[Deleted]	N	N	N	N
120MM TK APFSDS-T M829E2	[Deleted]	Y	Y	Y	Y
120MM TK MP-T M830E1	[Deleted]	Y	Y	Y	Y
105MM HERA M913	[Deleted]	N	N	N	N
155MM BASEBURNER M864	[Deleted]	N	N	N	N
155MM ADAM M731	[Deleted]	N	N	N	N
155MM SADARM XM898	[Deleted]	Y	Y	Y	Y
VOLCANO	[Deleted]	N	Y	Y	Y

(24 APR 91)

General SCHUMACHER. Sir, this chart speaks to those items that we were just talking about. It shows the days of sustainability at the end of the 1993 period, and what I am faced with in terms of out-year buys. You will see for several of those that the "N" means "no." We will not be buying those rounds.



MODERN MUNITIONS
FY92/93 BUDGET REQUEST

ITEM	BUDGET REQUEST FY92	BUDGET REQUEST FY93
25MM APFSDS-T M919	$10.5	0
120MM MORTAR HE M934/M933	$36.4	$27.4
105MM TANK APFSDS-T M900A1	$64.5	0
[Deleted]	[Deleted]	[Deleted]
[Deleted]	[Deleted]	[Deleted]
105MM HERA M913	$15.1	$15.1
155MM BASEBURNER M864	$120.9	$112.1
155MM PROP CHG M203	$144.6	$149.8
155MM SADARM XM898	0	$43.1

DOLLARS IN MILLIONS

(24 APR 91)

The next chart shows some of these 31 items that I do have in the budget. It shows that, at least in two cases, in the fiscal year 1993 period we do not plan to buy those items.

Senator LOTT. Why not?

General SCHUMACHER. Sir, in one case, on the M900A1, that is driven primarily, in my view, by the fact that we are switching out our tank fleet a little faster than we had planned, in terms of 120mm versus 105mm.

In the other case, it is purely an affordability issue; with the available dollars that I have to manage, and trying to balance what the user would like me to buy, and balancing the industrial base, there are not sufficient dollars in there to buy the 25mm M919.

I just wanted to reflect the problem that we are faced with. The older 25mm round, which worked superbly in Southwest Asia, cost about $28 or $29. The new M919 round, which is a more lethal round and more effective, has a unit price of roughly three to four times that price. When I do not buy an M919, for example, I'm able to take those dollars and buy a larger quantity to keep the base warm than if I tried to buy M919s.

Senator DIXON. And there is no danger of losing that production line, then?

General SCHUMACHER. No, sir—only because the particular contractors that make the old round also are involved in the M919, Aerojet and Alliant.

Sir, that concludes my portion of the briefing.

[The prepared statement of General Schumacher follows:]

PREPARED STATEMENT BY GENERAL SCHUMACHER

During the closed portion of this hearing, I would like to discuss first our ammunition support for Operation Desert Storm, and then our overall ammunition sustainability posture.

CHART 1

During Operation Desert Shield/Desert Storm, we shipped 476 thousand short tons of Army ammunition to Southwest Asia against the CINC's initial requirement of 450 thousand tons. When the war ended, 291 thousand tons were on the ground, while 160 thousand tons were on ships, anchored or in safe havens, ready to be off-loaded if required. These ships were sent back to their originating ports when hostilities ended.

CHART 2

We shipped ammunition to Southwest Asia at a rate never experienced before. This chart shows the tonnage shipped by month. Our ammunition stored on prepo ships was the first to arrive in country, with later shipments arriving from CONUS, Europe, and the Korean theater. As the threat of war became imminent, our ammunition shipments rose to over 100 thousand short tons per month.

CHART 3

This chart shows Desert Storm ammunition consumption that has been reported so far. The data is incomplete, as all units have not yet reported this information. We expect to have more complete expenditure data within 6 months. In addition to combat expenditures, we will be collecting data on training expenditures and ammunition which has been found to be unserviceable and uneconomically repairable. We will not know the full extent of the stock status until all deployed units turn in their ammunition and it is inspected for serviceability.

CHART 4

During Operation Desert Shield, we took several actions to ensure adequate ammunition was available to support our troops. We surged numerous items that were in production (example: 105mm tank M900A1); we initiated procurement for items with no programmed buys (example: 25mm APDS-T M791)—budget roll lines, the 25mm in this case, greatly facilitated this process. We expedited the testing and release of new rounds (example: 155mm baseburner); and we solicited help from our allies (example: German tank round).

CHART 5

Congress has provided $509.6 million for ammunition in the fiscal year 1991 Desert Storm supplemental appropriation. These funds were requested to replace Desert Storm losses, and to prevent production breaks resulting from our surge of selected ammunition rounds. This chart shows a breakout of the supplemental appropriation by ammunition type and category. As we obtain more complete data on Desert Storm expenditures, we will review our stockpile status and adjust our ammunition buys as required.

CHART 6

We realized quickly during Operation Desert Shield that most ammo shortfalls cannot be fixed in the near-term by surging of production. Maintaining two producers certainly aids surge levels, and maintaining a warm base is absolutely essential for the production of key warfighters. The current reprogramming rules limit our flexibility to move dollars to fund critical items in such an operation. For example, the Food and Forage Act doesn't apply. However, the institution of roll lines has proved very beneficial as it allows us to move dollars within families (e.g., 25mm).

Now I would like to address our overall sustainability posture.

CHART 7

Conventional ammunition sustainability is measured in days of sustainment, or the number of days combat forces can be sustained in an all out, conventional war. The desired sustainment level for preferred, or "modern" munitions, is [deleted]. This chart shows a composite of the days of sustainment for 31 modern munitions. Only 12 of these newer munitions will be [deleted] by the end of the fiscal year 1993 funded delivery period.

CHART 8

The next chart shows our sustainability for the same 31 items at the end of the fiscal year 1997 funded delivery period. Although some items move up from the [deleted], the number of items at [deleted] actually decreases, because training and test losses will not have been replaced with new procurements during this time frame.

CHART 9

This chart shows days of sustainment and outyear procurements for key modern munitions that are [deleted] sustainment level. Since no buys are programmed beyond fiscal year 1993 for 25mm Bradley or artillery ammunition, except SADARM, our sustainability posture for these items will not improve in future years.

CHART 10

This chart shows what is budgeted for modern munitions in our fiscal year 1992/1993 request. We are using our constrained resources to modernize war reserve stocks in lieu of achieving significant gains in sustainability. Modernized tank and artillery rounds account for 88 percent of our total war reserve request in fiscal year 1992 and 95 percent in fiscal year 1993. This trend continues in the out years; although the percentage for tank and artillery declines somewhat as more dollars are applied to emerging mine systems, beginning in fiscal year 1995.

In an era of declining resources, we are striving to use our ammunition dollars wisely by investing in new technology and training ammunition to maintain a high state of readiness for our combat forces, at the expense of significant gains in our sustainability posture. As was demonstrated in Operation Desert Storm, advanced technology and troop readiness are key elements to success on today's modern battlefield.

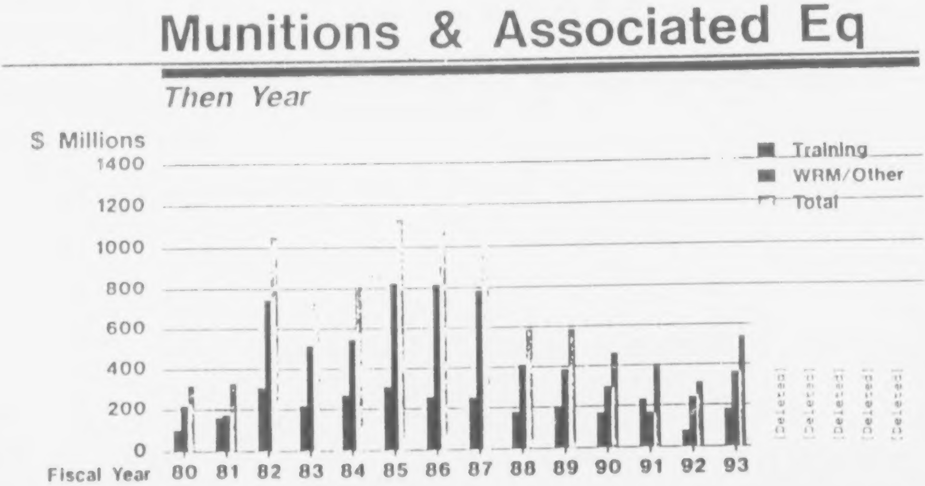
Senator DIXON. Thank you.

General Hopp, do you have something for us now?

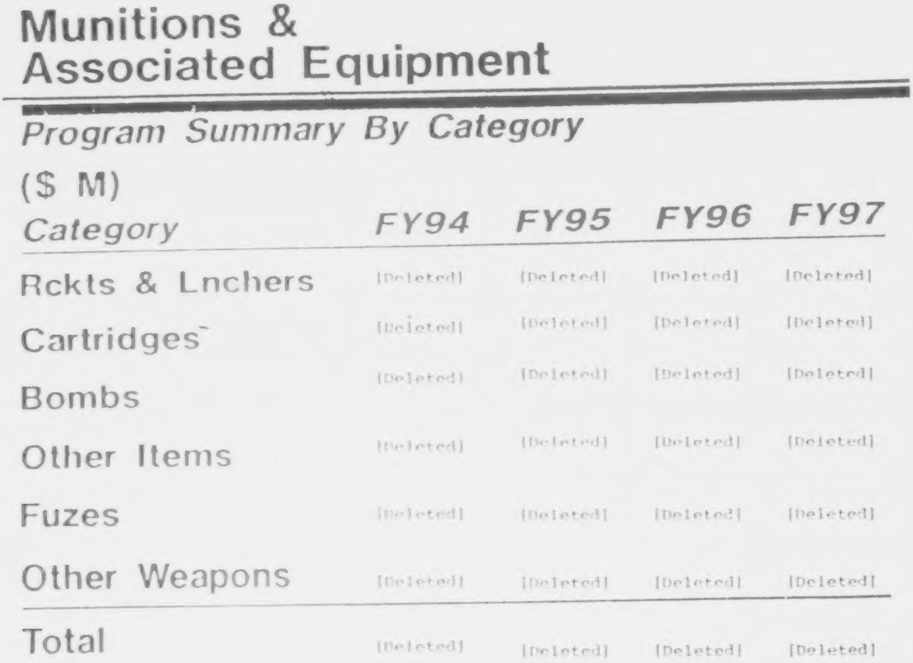
STATEMENT OF MAJ. GEN. JAMES W. HOPP, USAF, DIRECTOR OF SUPPLY, DEPUTY CHIEF OF STAFF FOR LOGISTICS, U.S. AIR FORCE

General HOPP. Thank you, sir. I have a few charts for the closed session.

Sir, two of the charts I showed before, and these charts now extend the time period out to 1994 and 1997.



I would draw your attention to the first bar, which shows training. As I mentioned earlier, it increases in 1993 to about the historical level of 33 percent of the munitions request, and remains stable through the 1997 time period. Our WRM funding is roughly two-thirds, or 67 percent, and remains the same throughout the period.



Munitions & Associated Equipment

Program Summary By Category

($ M)

Category	*FY94*	*FY95*	*FY96*	*FY97*
Rckts & Lnchers	[Deleted]	[Deleted]	[Deleted]	[Deleted]
Cartridges	[Deleted]	[Deleted]	[Deleted]	[Deleted]
Bombs	[Deleted]	[Deleted]	[Deleted]	[Deleted]
Other Items	[Deleted]	[Deleted]	[Deleted]	[Deleted]
Fuzes	[Deleted]	[Deleted]	[Deleted]	[Deleted]
Other Weapons	[Deleted]	[Deleted]	[Deleted]	[Deleted]
Total	[Deleted]	[Deleted]	[Deleted]	[Deleted]

On the next chart, I have taken categories of items that we're purchasing and extended them through 1997 as well. The point I would make on this chart is the same one I made earlier. In the "bombs" category, the Sensor Fuzed Weapon is the largest investment and represents 55 percent of what we will procure or propose to procure during that period.

Sir, you asked us to address Desert Storm.

Senator DIXON. May I interrupt you there, General Hopp? I think what happened before Senator Lott came in I would like to repeat what I said for his benefit. It was remarkable how little they actually used in Desert Storm. I don't know if you are aware of that.

I think you said they had shipped 490,000 short tons.

General SCHUMACHER. Sir, 476,000 short tons.

Senator DIXON. You would be interested to know that they only used a small part of that, about 20,400 tons. I never did do the math there.

General SCHUMACHER. It's about 4 percent, sir.

Senator DIXON. Go ahead, General.

General HOPP. I would point out that tonnage was for the Army, sir.

Senator DIXON. Oh, yes. You guys probably used a lot more. Maybe you ought to talk about yourselves.

General SCHUMACHER. Sir, ours was based on only 100 hours versus how many days for the Air Force.

Senator DIXON. General, go right ahead.

Desert Storm

Consumption vs Supplemental

	QTY	Consumption $M	Supplemental $M
GP Bombs	[Deleted]	116.5	—
CBUs	[Deleted]	535.8	183.2
GBUs	[Deleted]	748.8	186.2
20MM	[Deleted]	.5	—
30MM	[Deleted]	19.1	—
Chaff/Flares	[Deleted]	›3.5	2.4
Other items	[Deleted]		20.8
Total		$1.4B	$392.6M

General Hopp. Sir, this is our consumption versus supplemental funding. Before I address the specifics I wish to repeat what I said earlier. The committee's support that allowed our crews realistic training through Red Flag and other exercises, was absolutely critical to aircrew effectiveness, and in allowing us to build the WRM levels of modern, effective munitions.

The chart shows consumption of the categories of munitions and the amount in the supplemental request. As you can see, there is about a $1 billion difference between the amount consumed and the amount that we're getting. We're still assessing what we consumed in Desert Storm. We are analyzing consumption, the threat change, the force structure drawdown that is occurring or that will occur, and we are evaluating the date through use of a model we call the Non-Nuclear Consumable Annual Analysis, or NCAA.

The analysis will be completed this summer. It will give us new requirements by type of ammunition against a specific threat. We may need to adjust our 1993 request based upon this analysis .

Senator Lott. Mr. Chairman, may I ask a question on that?

Senator Dixon. Of course.

Senator Lott. I have three points.

First, you would expect that supplemental number there, the 392 to change significantly upward when you get into the summer with your total final assessment, right?

General Hopp. Yes, sir, if we are given an opportunity to request an increase in the supplemental. What I was speaking to was that we would need to address the shortfall in our amended 1993 budget request for sure, but if we get an opportunity to get more dollars out of the supplemental, we in fact, would make that kind of request.

Senator Lott. You do not intend to attempt by any stretch of the imagination to necessary replace all of your consumption from Desert Storm/Desert Shield? Is that correct?

General Hopp. Yes, sir. That is correct in terms of quantities.

Senator **Dixon**. It is correct that you do not intend to replace it all?

General **Hopp**. Yes, sir.

What we are trying to do is not replace the older, less effective munitions, but replace them with more modern, top of the line type munitions. Instead of replacing an older cluster bomb unit, for example, we would replace them with the new CEM, or Combined Effects Munitions.

Senator **Dixon**. Yes, sure.

Senator **Lott**. I think the credible question then is you are going to be forced to deal with this billion dollar shortfall some way or other—either decide you don't need some of it or get it in out-year budgets. You mentioned 1993.

Now that is a lot of difference there. And if you have to get it in those out-years, then the whole likelihood is there are going to be other things that will have to suffer to cover that in an already declining budget allocation for this category as well as others. I mean, a billion dollar consumption that is not replaced, or a significant portion of it that is not replaced, or if it has to be replaced to be replaced in the out-years is going to be a major problem for you.

General **Hopp**. It will have to compete with other requirements.

However, as I said, as we do the analysis, we may find that some of the consumption is not required to be replaced. If we are given an opportunity to re-enter the 1991 supplemental after we have done our analysis, we would certainly be prepared to do that if requirements exist.

Senator **Dixon**. May I suggest to my colleague that I agree with his point. I think it is a very valid one.

Isn't another alternative the possibility of continuing to review this until we reach markup?

General **Hopp**. Sir, we will continue to review it.

Senator **Dixon**. I mean, if you are saying to my colleague that there is actually going to be a lot of shortfall here that we need and particularly in the better stuff, I would certainly like to make an attempt to get it in this time.

General **Hopp**. Yes, sir, and we will provide that.

[The information follows:]

PROPOSED AMMUNITION INCREASES

The following items represent our initial assessment of additional Desert Storm consumption that needs to be replaced.

Item	Request in millions
Laser Bomb Guidance Kits	$460.0
CBU-87 Combined Effects Munition)	135.0
FMU-139	64.2
GBU-15	42.1
M117	37.4
CBU-89 (Gator)	12.2
BSU-49 Inflatable Retarder	3.3
BSU-S0 Inflatable Retarder	2.8

Senator LOTT. Maybe this would be the time to ask one of the two questions that I really wanted to ask if I could, Mr. Chairman.

Now I realize this may put you guys on the spot, but that is exactly what I intend to do because this is a closed session and we need to know this. If we could find a way to do it, to add additional funds for certain ammo accounts, where would your biggest or your most important priority be? Where would you like for us to do it?

I would like to hear from each of you of a couple of places or two or three, whatever, that you really feel like you will have a significant shortfall, that you're extremely concerned about, that you're going to have to deal with under the budget constraints unless we find some relief for you?

Senator DIXON. That's a good question.

General HOPP. Sir, I would have to say that I am concerned about training ammunition, specifically 20 millimeter, and practice bombs, what we call the BDU-33's. I am also concerned about flares. While not a very glamorous item, flares are important to our aircraft self-protection program.

Finally, I would be concerned about laser guided bomb kits, called LGB's.

MUNITIONS POSTURE—WITH SUPPLEMENTAL FUNDING

[Deleted.]
— Inventory
— Supplemental
— Expnd/Not replaced

General HOPP. As you can see on this chart we did not consume a great number LGB's in terms of the overall size of the bar, [deleted] but we did consume many of the newer versions. We do believe that, even in our requirements recalculation, we'll see that laser guided bombs will be a weapon of choice because of their effectiveness.

Senator DIXON. If I could interrupt at this point in time, I thoroughly agree with my colleague.

We have, in the past, put some in for you, you know. I would very much like to try it again this year. I think we can make a case for it this year.

I wish the two of you would make your list of things that you think you really need that are not in this and get it to our staff. If my colleague is willing to—and I sense he is—help me make that case so that we have an advocate for you in each of our separate caucuses on these issues, I think we would have a chance.

But you ought to take that opportunity.

General SCHUMACHER. Yes, sir. I will.

Senator LOTT. Would you like to just mention a couple, General Schumacher?

General SCHUMACHER. Yes, sir. At a recent hearing, I was asked that question also. At that time, I gave three items. Upon reflection, I am now up to four, not three.

The first one is a training item. When we switched out the 105mm tanks in Southwest Asia and we placed them with 120mm, needless to say those troops had to be trained quickly for the new 120mm. And so, my projections of how I was going to consume 120 training ammunition rapidly changed.

When we put the 1992 budget together, that was not available to us.

So, the number one item would be some additional 120mm training ammunition for our tank program.

The second is one of the items we talked about earlier, that is, the M919. The 25mm family—and there are two items, but I think particularly the M919—certainly could use some more money to get that up at a more economical rate than what we are currently planning.

The third item is the 120mm mortar program, which is a new program. That is less of an industrial base issue than the others. The particular options that I have for the first 2-year buys and the quantity of dollars that I have there probably will cause me to renegotiate those contracts, and probably the price may go up a little. So that would be my third item, the 120mm mortar.

Last, but not least, is an industrial base issue. The electronic time fuse is a base that, as I look at the amount of dollars in it, is not, in my view, too viable. I would like to work very hard in the out-years and starting in 1992 to find additional funds so that I keep at least one producer up and running with the new electronic time fuse.

That would be my fourth one, sir.

Senator DIXON. I think my colleague has made a major contribution here. I would urge both of you now to sit down with the staff folks here, and I will urge them to sit down with you. Let's get the list. Let's get it complete. Let us worry about whether we can find the money for you.

You give us what you think you really need and then we'll do the best we can. If we can't get it all, we'll try to get some of them.

Senator LOTT. For instance, for the M919, as I recall the chart, you are not talking about a lot of money there, are you?

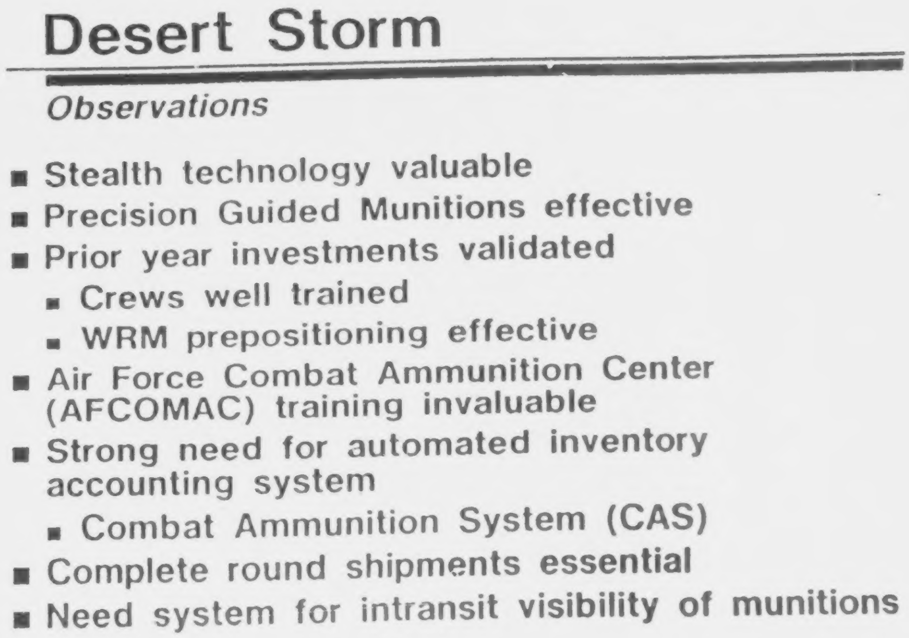
General SCHUMACHER. Well, sir, to be honest with you, to get it up to an economical rate, you are probably talking about an additional $56 million.

Senator LOTT. Oh, it is that much, then.

General SCHUMACHER. Yes, sir.

Senator DIXON. Let's get the whole figure. Don't be hesitant about it. Then we'll see what we think we can do and we'll get back to you.

General HOPP. Mr. Chairman, I am about to conclude my presentation.



Desert Storm

Observations

- Stealth technology valuable
- Precision Guided Munitions effective
- Prior year investments validated
  - Crews well trained
  - WRM prepositioning effective
- Air Force Combat Ammunition Center (AFCOMAC) training invaluable
- Strong need for automated inventory accounting system
  - Combat Ammunition System (CAS)
- Complete round shipments essential
- Need system for intransit visibility of munitions

General HOPP. Shown here are some observations that I would make regarding Desert Storm. You have heard about and seen the effectiveness of stealth technology and precision guided munitions. We also confirmed the value and continued need for realistic training of our load and ammunition build-up crews. Finally, the need for a good, automated, inventory system and for in-transit assist visibility, both systems the Air Force has under procurement was reinforced.

Sir, that concludes my remarks.

Senator DIXON. I thank you both.

I'll tell you this, we'll put something in, though I don't know how much. If you will give us the whole list that each of you has with whatever supporting strong arguments you can make for those particular items, I think Senator Lott and this Senator can make a fairly compelling case with our colleagues on each side of the table in the committee. I would feel pretty confident that we can help some, though I cannot promise you how much.

[The information follows:]

PROPOSED AMMUNITION INCREASES

The following items represent our initial assessment of additional Desert Storm consumption that needs to be replaced.

Item	Request in millions
Laser Bomb Guidance Kits	$460.0
CBU-87 Combined Effects Munition)	135.0
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M117	37.4
CBU-89 (Gator)	12.2

Item	Request in millions
BSU-49 Inflatable Retarder	3.3
BSU-S0 Inflatable Retarder	2.8

Senator DIXON. I really do believe that we ought to be doing a little better in these ammo programs. I know you are doing what it is your duty to do, and at the same time I know that some of these things you would like to do a little better.

Maybe we can help you there. Thank you.

This meeting is adjourned.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR ALAN DIXON

COMBINED EFFECTS MUNITION FOR FISCAL YEAR 1992

Senator DIXON. General Hopp, the Air Force used a large number of Combined Effects Munition cluster bombs during the Persian Gulf war. Although the Fiscal Year 1991 Supplemental included $150 million to buy more of these munitions, there are currently no funds in the fiscal year 1992 budget for this munition. In light of the Persian Gulf experience, do you believe continued production of the Combined Effects Munition in fiscal year 1992 is needed?

General HOPP. Sir, continued production of Combined Effects Munition (CEM) will run beyond fiscal year 1992 given prior year undelivered quantities plus Supplemental funding. We are working with the Army Single Manager for Conventional Ammunition (SMCA) to establish the optimum production rate. Current planning indicates fiscal year 1990 and prior year production running through March 1992, and fiscal year 1991 Desert Storm Supplemental quantity, of approximately 10,000 systems, delivering through mid-fiscal year 1993.

30MM APACHE AMMO

Senator DIXON. General Schumacher, I understand the Apache helicopter saw a great deal of action during Operation Desert Storm. Why doesn't the Army's budget include funds for the Apache's 30 millimeter chain gun ammunition in either fiscal years 1992 or 1993?

General SCHUMACHER. The Army Acquisition Objective for 30mm HEDP ammunition was met several years ago. Since then only training ammunition has been procured. The $28 million in the fiscal year 1991 supplemental budget will replace the Operation Desert Storm consumption of 30 HEDP cartridges.

PIVADS

Senator DIXON. General Schumacher, why is the Army not upgrading its limited air defense capability by procuring Product Improved Vulcan Air Defense (PIVADS) ammunition in fiscal year 1992?

General SCHUMACHER. Procurement of PIVADS ammunition is an affordability issue when compared to higher priority requirements. The combined inventory level for sustainability of both the replaced high explosive incendiary-traced cartridge and the new PIVADS cartridge is adequate.

M864 BASEBURNER ASSEMBLY

Senator DIXON. General Schumacher, does the Army plan to downselect to only one producer on the M864 baseburner assembly? If so, when?

General SCHUMACHER. Yes. The Army is developing a downselect strategy for the baseburner assembly which will be based on "best value" contracting.

PAYING TO RETAIN TWO PRODUCERS

Senator DIXON. How much of a premium is the Army currently paying to retain two production sources for this item?

General **Schumacher**. One producer, under a fixed price incentive contract, is delivering the M864 baseburner assembly for $215.21 each. The second producer, under a cost plus contract, is delivering them for an estimated cost of $157.55 each. Currently, both producers are required to eliminate the backlog.

JUSTIFY TWO PRODUCERS

Senator **Dixon**. Do the projected outyear procurement quantities of the M864 round justify retaining two production sources for this item?

General **Schumacher**. No. The final M864 buy in fiscal year 1993 will not support two production sources.

ADDITIONAL FUNDS

Senator **Dixon**. General Schumacher and General Hopp, if the subcommittee is able to apply additional funds for ammunition during markup of the fiscal years 1992-93 Defense authorization bill, please indicate which programs you believe should be considered for additional funds.

General **Schumacher**. The Army's fiscal years 1992-93 ammunition budget request was developed considering available dollars, Army priorities, and our existing production capability. Any additional ammunition funding would have to be considered in light of total Army priorities and requirements. For the moment, and unless the final Desert Storm tally changes dramatically, we have a balanced ammunition program considering the total Army TOA. If it is the intent of the subcommittee to apply additional funds, the following four programs merit consideration:

(1) 120mm tank training ammunition
(2) M919 25mm ammunition
(3) 120mm mortar ammunition
(4) Artillery electronic time fuzes.

Questions Submitted by Senator Strom Thurmond

STUDY AMMUNITION BASE

Senator **Thurmond**. General Schumacher, could you tell us what share of the Army's ammunition is produced by government owned or operated facilities and what share goes to commercial manufacturers?

General **Schumacher**. Based on funds issued from the Conventional Ammunition Working Capital Fund (CAWCF) for fiscal year 1990, approximately 37 percent of our ammunition dollars went to government owned or operated facilities while 63 percent went to commercial contractors. The fiscal year 1991 breakout will not be available until the close of the fiscal year.

AMMUNITION PROCURED FROM OFF-SHORE MANUFACTURERS

Senator **Thurmond**. General Hopp, I believe that we all agree that the domestic ammunition production base is facing severe economic hardships as we reduce our defense expenditures. In fact, we may lose so many of our commercial producers, that it will be difficult to rebuild the production base in event of a contingency. Could you tell the committee how much of the Air Force ammunition is procured from off-shore manufacturers and could our domestic manufacturing base perform this work?

General **Hopp**. With one exception, all end items currently on contract are being procured and produced in the United States. The exception is the Squad Automatic Weapon (SAW). The vendor for this item is Fabrique Nationale, a Belgian company. The U.S. licensee for the SAW is FN Manufacturing, Inc., Columbia, SC. A small initial production run of SAW will be assembled in South Carolina using both U.S. and foreign made parts. Full scale production will be with U.S. made parts only.

DRAWDOWN OF WAR RESERVES

Senator **Thurmond**. General Schumacher, in your statement you indicate that because the budget request does not meet your total requirements, the Army is drawing down war reserve stocks to support training. What type of ammunition are you withdrawing from the war reserves and do you have plans to restock these ammunitions?

General **Schumacher**. Artillery, mortar and small arms ammunition account for over 80 percent of our war reserve drawdown to support training. Most of these items are excess to our current inventory needs or are being replaced by newer, more lethal ammunition. As a result, we have no plans to restock these items. 4.2-inch mortar and 8-inch artillery ammunition are examples of items being replaced. Buys will be programmed for ammunition with a continuing war reserve requirement when inventories are drawn down to a minimum sustainment level.

FUZE IMPACT ON PROD BASE

Senator THURMOND. General Schumacher, I noticed that the Army will not be procuring fuzes during fiscal years 1992 and 1993. Although I understand you have sufficient fuzes to match your projectile requirements, I do not understand how we can maintain a manufacturing base with a 2-year break in procurement. What impact will this 2-year hiatus in fuze procurement have on the production base?

General SCHUMACHER. In actuality there is no 2-year break in artillery fuze production. As we are finishing up mechanical fuze production, we will transition to the production of artillery electronic time fuzes. Further, these artillery fuze buys do not constitute the total fuze buys for fiscal year 1992 and fiscal year 1993. There will be fuzes procured for other munitions such as mortars, rockets, mines, tank ammunition, etc., for all the service through the Single Manager for Conventional Ammunition during this period.

DESERT STORM IMPACT ON WAR RESERVES

Senator THURMOND. What impact did Operation Desert Storm have on the Army's war reserve stocks and will the $425 million provided in the Operation Desert Storm Supplemental allow you to rebuild these stocks?

General SCHUMACHER. We will not know the full impact of Operation Desert Storm on our war reserve stocks until all units have reported their combat and training expenditures, and the ammunition being returned from Southwest Asia is inspected for serviceability. We expect to have this data within 6 months. Certainly the supplemental funding provided by the Congress will help in rebuilding our war reserves. As we obtain more complete data on Desert Storm expenditures and the condition of our ammunition stocks, we will review our stockpile status and adjust future procurement programs as required.

DESERT STORM TRAINING AMMUNITION SUFFICIENCY

Senator THURMOND. General Hopp, I was informed that during Operation Desert Storm, the Air Force did not have sufficient training ammunition in the Persian Gulf area to maintain proficiency in certain type missions. Would you comment on that allegation?

General HOPP. Sir, although training munitions were not initially deployed to the region, aircrew training was not significantly impacted. When Operation Desert Shield commenced, our initial priority was to ensure our forces had sufficient combat ammunition to use if required. Once we met the theater commanders' initial requirements for combat ammunition, about mid-October 1990, we then began supplying training ammunition for our aircrews.

MAINTAINING A WARM PRODUCTION BASE FOR MK-84 BOMBS

Senator THURMOND. General Hopp, I understand that there is only one producer for the Mark 84 2,000 pound bomb. Since the Air Force does not contemplate replacing the Mark 84 with the advanced bomb family, will you continue to maintain a warm industrial base for this weapon?

General HOPP. Our intent is to maintain a warm base; however, there may not be a qualified producer available after current production quantities are delivered. We are working this issue with the Army Single Manager for Conventional Ammunition (SMCA).

MICROCHIP TECHNOLOGY FROM OFF-SHORE PRODUCERS

Senator THURMOND. General Hopp, our modern sophisticated and highly accurate weapons rely on microchip technology to ensure their accuracy. Do you know if any of the components for these weapons come from off-shore producers and if so what are your concerns on having to rely on these producers?

General HOPP. It is our understanding that prime contractors' for several of the weapons that require electronic components (i.e., the FMU-139 fuze) obtain some of those components off-shore. Also, our limited visibility of prime contractors' contracts with their suppliers makes it difficult to answer your question completely, and in general, there is no Federal Acquisition Regulation clause that precludes contractors from obtaining microchip components off-shore.

STUDY AMMUNITION BASE

Senator THURMOND. General Schumacher, recently I received a letter which suggested that the Department of Defense should be required to determine the size and nature of the ammunition base it needs to meet the strategies and then develop a plan to sustain that base. I hope that the Department has already initiated such a study. Would you please comment on what the Department is doing to ensure the future viability of the ammunition production base?

General SCHUMACHER. During 1990 the Army completed a major study of DOD ammunition acquisition and production base reconfiguration. The study report entitled, "Ammunition Production Base Planning and Restructuring Study" contained a plan for the ammunition industrial base through the year 1998 and identified a priority of plants to retain and maintain. This plan is now being implemented in conjunction with the procurement program and the changing world situation.

FOREIGN COMPETITION

Senator THURMOND. Mr. Allen and Mr. Appleman, would each of you address the issue of foreign competition and its impact on the domestic ammunition production base. Specifically, is work being done overseas that is critical to our production base and are there any items being procured overseas for which there is no domestic manufacturer?

Mr. ALLEN. Two areas of concern are affected by foreign competition to the domestic ammunition base.

1. *The Production Base.* The U.S. Army restricts competition on items necessary to support a war-fighting capability to U.S. and Canadian sources through an exception to the full and open competition sought by CICA. This practice should continue to preclude the circumstances of an essential item only being available from an off-shore source.

2. *The Technical Base.* The level of engineering sophistication of our allies, especially in Western Europe, is on a par to that of the United States in most areas and is definitely pushing the state-of-the-art in many important areas. In the future, the United States must ensure that the Technical Base is maintained in the United States, as well as the ability to manufacture ammunition products, in order to fully utilize the current generation of sophisticated weaponry and develop the next.

The other area of concern relating to foreign dependence has to do with sources for raw materials and components. There are certain raw materials, including minerals and chemicals, used in the propellant industry with which I am most familiar, that are available only from foreign sources. I assume this is true in other product areas as well. In these cases, we must search for alternative materials when feasible and assure reliable sources otherwise.

Mr. APPLEMAN. With regard to foreign competitors, especially in the area of components, I would not permit same to occur. The specific area in point is the 120mm mortar ammunition. We were counting on producing the propellant increments for this item to make up for short falls in 60mm and 81mm propellant increments which are being cut back in the budget over the next few years. We use essentially the same equipment to produce all of these increments. In this way our base would be kept warm. It is my understanding that contrary to past planning, there have been some discussion underway to procure the 120mm increments in Israel.

Senator THURMOND. Mr. Allen, the intelligence community estimates that we will have 2 years warning of a Soviet build up in Europe. Assuming that our national leaders will react to the first signs of a build up, is this enough time to build up our ammunition production base to meet the needs of a European theater conflict?

Mr. ALLEN. Two years warning is enough time to accomplish a build-up if the U.S. Army and the ammunition industrial base are properly prepared and utilized:

1. The mobilization base must be positioned and prepared. Positioning includes having technically competent manufacturers with product knowledge ready. Prepared means that production equipment and, when justified, long-lead materials must be in a condition that transitions quickly to production.

2. The mobilization base must be activated early in the 2-year period in order to produce products for initially deployed troops.

Therefore, the answer to your question is yes, 2 years is most likely enough time. Unfortunately, today's mobilization is not prepared to react to this scenario due to neglect over the past 10 years. The U.S. Army is attempting to organize and prepare the ammunition base, but has a great deal of work ahead of it in ensuring the consideration of the technical base and implementing planning through PPS contracts and Form 1519s.

Senator **Thurmond**. Mr. Appleman, what opportunities do our ammunition manufacturers have on the international market and what barriers are you facing on the international market?

Mr. **Appleman**. With regard to foreign sales, I have had opportunities to sell small quantities of mortar increments as well as 155mm M203A1 cases to either foreign governments or prime contractors. For these items, the nitrocellulose I use is government furnished. I believe that Public Law 97-392 should be modified to facilitate our ability to make such sales. It is possible to do so, but there are many administrative delays that I believe are not necessary.

[Whereupon, at 3:55 p.m., the subcommittee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

WEDNESDAY, MAY 15, 1991

U.S. SENATE,
SUBCOMMITTEE ON READINESS,
SUSTAINABILITY AND SUPPORT,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

OPERATION AND MAINTENANCE PROGRAMS

The subcommittee met, pursuant to notice, at 2:13 p.m., Senator Alan Dixon (chairman of the subcommittee) presiding.

Committee members present: Senators Dixon, Levin, Lott, and Mack.

Professional staff members present: Robert E. Bayer, David S. Lyles, Michael J. McCord.

Minority staff members present: Ronald P. Kelly and George W. Lauffer, professional staff members.

Staff assistant present: Mary J. Kampo.

Committee members' assistants present: Charles C. Smith, assistant to Senator Dixon; Terence M. Lynch, assistant to Senator Shelby; Samuel D. Adcock, assistant to Senator Lott; Eric H. Thoemmes, assistant to Senator Coats; Ross Lindholm, assistant to Senator Mack; Thomas L. Lankford, assistant to Senator Smith.

OPENING STATEMENT OF SENATOR ALAN DIXON, CHAIRMAN

Senator DIXON. Ladies and gentlemen, I apologize for being a few minutes late. I pride myself on my punctuality, but sometimes these things are avoidable. A friend of mine from Illinois was appointed to an important position in the Department of Justice, and it was necessary for me to be there to support him.

That committee met at 2:00 p.m. So I did pretty well, I guess, in getting here by now.

As you all know, the subcommittee meets today to continue our hearings on the Fiscal Year 1992/1993 Defense Authorization Request.

The focus of this hearing is on the operation and maintenance accounts, and the working capital fund accounts in the Department of Defense.

My distinguished ranking colleague, Senator Lott and I asked our witnesses today to give us an overview of these accounts and the respective services and to discuss the ongoing implementation of the Defense Management Report Initiatives affecting these accounts.

I want to warn my colleagues at the outset of the hearing that those of us who thought we understood how the revolving funds worked in the Defense Department are about to have our understandings sorely tested.

We are going to hear about a new concept in revolving funds called DBOF, the Defense Business Operating Fund. Mr. Donald Shycoff is the Deputy Comptroller of the Defense Department, and the father, I understand some would say the perpetrator, of the DBOF.

He is accompanied today by Mrs. Barbara Lieby, the Deputy Director of the Operations Division in the Office of the Assistant Secretary of the Army for Financial Management; Rear Adm. William J. Hancock, the Director of the Operations Division, Office of the Navy Comptroller; Brig. Gen. J.C. Arick, the Director of Facilities and Services for the Marine Corps; and Brig. Gen. John L. Finan, the Director of Budget Operations in the Office of the Assistant Secretary of the Air Force for Financial Management.

We welcome all of you to the subcommittee this afternoon. Your prepared statements will be entered into the record in full, of course.

I understand Mr. Shycoff has some opening remarks, after which each of the service witnesses will give a brief statement.

I am glad to see my distinguished friend, the Senator from Florida, Senator Connie Mack here. Senator Mack, do you have any statement you would like to make before we proceed?

Senator MACK. No, I do not, Mr. Chairman. I appreciate the opportunity, but no, I look forward to the testimony.

Senator DIXON. Thank you very much. Mr. Shycoff?

STATEMENT OF DONALD B. SHYCOFF, PRINCIPAL DEPUTY COMPTROLLER, DEPARTMENT OF DEFENSE

Mr. SHYCOFF. Thank you, Mr. Chairman. I guess it is much better to be a father than a perpetrator. At a recent meeting, I was called the mother of DBOF, and I had a real hard time with that one.

I thought I would give a quick overview, if you will, of the O&M accounts and then spend most of my time talking about the Defense Business Operations Fund.

So with your permission, I have a few bullets that will show what we have in mind for 1992 and you have copies of these in front of you.

O&M FUNDING

(Dollars in Billions)

FY 1991	FY 1992	FY 1993
87.6	86.4	84.6

- DOWN $1.2 BILLION IN FY 1992 AND

  $1.8 BILLION IN FY 1993

- TRANSLATES TO DECREASE IN PROGRAM OF

  4.8% IN FY 1992

  3.9% IN FY 1993

Overall, our O&M funding request is $86.4 billion in 1992. It is down $1.2 billion in 1992 and $1.8 in 1993, as you can see.

Some of that is the reflection of changes we have made in the way funds are requested in 1992 and some of it is obviously changes in the inflation rate to cover the cost from year to year.

In the program side, we have a decrease of $1.2 billion which represents mostly the changes in force levels and about $400 million which mostly comes from the efficiencies in the Defense Management report.

I have with me the people from the services who can talk in more detail if you want to get into O&M.

Otherwise, I would move along to talk about my favorite subject, the Defense Business Operations Fund.

Chart 1

DOD FINANCIAL MANAGEMENT GOALS

- PROVIDE BEST SUPPORT TO OPERATING FORCES AT LOWEST COSTS
- ENABLE DOD CUSTOMERS TO ACHIEVE LOWER LONG-TERM COST OF OPERATIONS THROUGH IMPROVED VISIBILITY OF COSTS
- INFLUENCE DOD MANAGERS TO REDUCE COST OF DOING BUSINESS
- IMPROVE VISIBILITY OF OPERATIONS AND COSTS TO DECISION MAKERS AT ALL LEVELS (I.E., SERVICES, OSD, CONGRESS)

We do have some difficulty as we talk about the Defense Business Operations Fund because as you will see, at times we say it is not a big change, and at other times we say it is much bigger than a bread box.

What we are trying to do with this is meet the goals that are expressed on this first chart. We need to reduce the cost of our support establishment. We all know that the budget has to come down.

We have a budget summit agreement we have to live with, and we either reduce the cost of our support establishment or we take it out of force levels and readiness.

Our goal then is to do basically two things: give visibility to the people who incur costs as well as the people who set the requirements. We need to give all of them better visibility of their costs, and we believe that the use of revolving funds, the use of the DBOF, will do that.

We also think that in doing this we will provide better information to the Congress, and that the oversight committees will have better information also.

Chart 2

WHAT IS DBOF

- EXPANSION OF EXISTING REVOLVING FUNDS
- ESTABLISHMENT OF SUPPLIER-CUSTOMER RELATIONSHIP IN LARGER POPULATION
- MANAGEMENT STRUCTURE FOR OPERATION OF SUPPORT ESTABLISHMENT ON "BUSINESS" BASIS
    - COST ACCOUNTING
    - CUSTOMER DRIVEN REQUIREMENTS
- FRAMEWORK FOR REDUCING COST OF GOVERNMENT OPERATIONS
- INTRODUCTION OF CAPITAL BUDGETING PRINCIPLES

And so in trying to meet this goal, we have created something that we call the Defense Business Operations Fund. What is the Defense Business Operations Fund?

Essentially, it is an expansion of what we have been doing since 1951, which was the beginning of the industrial funds. The first one was the Naval shipyards, where essentially the requirer, the owners of the ships in this case, the Atlantic Fleet and the Pacific Fleet as represented by Admiral Hancock, comes to you for the appropriation, in this case for depot maintenance. They come in and tell you why they need ships to be maintained.

And then we run the shipyards as a business, so we can look at the cost of doing business and act as a board, like any board of directors would do, to see how we could bring the costs of our company down.

And so what we talk about, when we talk about the DBOF, is really an expansion of those existing revolving funds that have been called, up to now, industrial funds and stock funds.

For next year, what we have done is combine all of those existing accounts into this new account called the Defense Business Operations Fund. Basically, it will expand the supplier/customer relationship to a larger population.

The Defense Business Operations Fund will also give us an opportunity to have our managers use a business-type cost accounting system to focus on the cost of the output, rather than on "what does it cost to run my activity?"

Instead of focusing on the cost to run my activity, I focus on the cost of the output of my activity, and that may not seem like a big difference, but it is a very large difference, particularly when the output is driven by the customer and not driven by the activity itself, as in the case of ship maintenance where the fleet sets the requirements and the shipyard's job is to do it for the lowest possible cost.

We think that this revolving fund concept, as expressed in the DBOF, provides a framework for reducing the cost of government operations and, in 1992, we have also put in another idea. This is the introduction of capital budgeting, which is basically an expansion of the concept that says, in this business you see all of the costs of running that business and not costs that are scattered over six different appropriation titles.

Chart 3

BENEFITS OF ESTABLISHING THE DBOF

- ALL FUNDS IN A SINGLE ACCOUNT
- ACCOUNTING WORKLOAD REDUCED BECAUSE ALL BUSINESS AREAS IN SAME ACCOUNT
    - RECORDS INTRA-FUND TRANSACTIONS RATHER THAN BILLING PROCEDURES
- TOTAL COST OF OPERATIONS ARE REFLECTED THROUGH OPERATING AND CAPITAL BUDGETS
- PROVIDES TOOLS TO FOCUS MANAGEMENT ATTENTION ON COST

As I just indicated, having all of the funds in a single account provides us the efficiencies that we can get by flexibility to our managers to do something because it provides the best benefit for the lowest cost, and not have them saying, well, I only have money in this account or I only have money in that account.

We are also going to get a significant reduction in our accounting workload. We do over $20 billion worth of business between one business area and another. For example, the depot maintenance activities buy from the supply activities. The supply activities buy from the depot maintenance activities. We can reduce the accounting transactions, the financial transactions between them if they are all in the same account. If they all have the same banker, we do not have to write checks between each account and we expect over the long run to get a significant savings because of that.

And as I said, we think that we will give you better visibility when you see what both the operating budget and the capital budget are. We have already provided to your staff the details on the operating budget and the capital budget for 1992 and I would feel myself, that we probably have provided better information than has ever been provided to this committee on those business areas.

Chart 4

IMPACT OF DBOF IN FY 1992

NAME CHANGE: ALL EXISTING REVOLVING FUNDS WILL BE INCLUDED WITHIN THE DEFENSE BUSINESS OPERATIONS FUND

STRUCTURE CHANGE: ESTABLISHES A SINGLE FUND WITH DIVISIONS BY SERVICE AND BY BUSINESS AREA

NEW ADDITIONS TO DBOF: DEFENSE TECHNICAL INFORMATION CENTER, DEFENSE INDUSTRIAL PLANT EQUIPMENT CENTER, DEFENSE REUTILIZATION AND MARKETING SERVICE, DEFENSE FINANCE AND ACCOUNTING SERVICE, AND DEFENSE COMMISSARY AGENCY

OPERATIONAL CHANGE: INCLUDES CAPITAL BUDGETING

MANAGEMENT CHANGE: INCREASED FOCUS ON COST OF OPERATING A BUSINESS AREA

Having said how wonderful DBOF is going to be, from 1991 to 1992 there is really a very slight change. In 1992, we move all of the existing revolving funds into the DBOF, but for the way they operate, it is just a name change. They will do business in 1992 the same way they have done business in 1991, with the exception of capital budgeting.

It is a structure change, having a single fund, but we will still have the individual businesses. The businesses will still be run by the military departments, for example the Navy will be responsible for managing all of the business areas in the Department of the Navy. There will be no change in the way they are managed.

We have added five activities from defense agencies, where they have been working on this concept for a period of time, and we think we are ready to do it in fiscal year 1992.

The major change in 1992 is the inclusion of capital budgeting, where instead of asking in the procurement accounts for the equipment such as the machine tool that a shipyard might use or a new forklift that a supply depot might use, or a new facility, we are including those funds in the cost of the DBOF, which would be recovered in future times through depreciation, like any business.

One of the things that happens today is somebody comes before this committee, or others, to justify a construction project and it is never seen again. There is no follow-through in terms of how are we doing in 1991 for the things that somebody came before you 5 years ago and said this would pay for itself in 5 years. Did it?

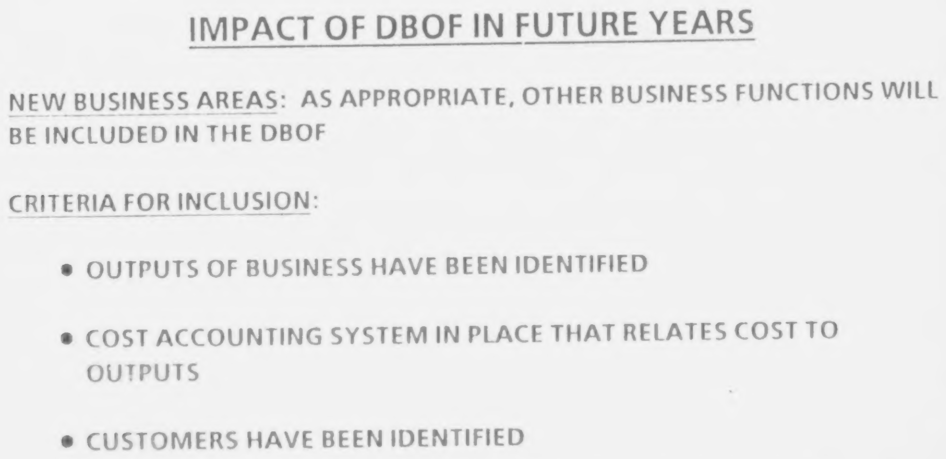
We do not have the visibility, our system does not produce that visibility. By having them all in the same appropriation, having them all in the same account, we will see the depreciation. We will have the follow-through.

The people who manage these accounts may not even be aware of what was said about a project as it came up a different appropriation route. So what we do with DBOF is provide for ourselves the visibility in terms of what we expect to see and accountability for you.

The management change that I talk about here is reflected in the name change to the Business Operations Fund. We want to get a message to the Department of Defense employees, to the Department of Defense managers, that we expect them to run their activities as a business.

We want them to provide a quality product. We want to measure their performance, but we also want them to be interested in costs. And so we could have done all of this without a name change, but we thought a name change was important to get new thought out there and to reemphasize this idea of bringing the costs down.

Chart 5



IMPACT OF DBOF IN FUTURE YEARS

NEW BUSINESS AREAS: AS APPROPRIATE, OTHER BUSINESS FUNCTIONS WILL BE INCLUDED IN THE DBOF

CRITERIA FOR INCLUSION:

- OUTPUTS OF BUSINESS HAVE BEEN IDENTIFIED
- COST ACCOUNTING SYSTEM IN PLACE THAT RELATES COST TO OUTPUTS
- CUSTOMERS HAVE BEEN IDENTIFIED

Just a couple more. We have task forces with members of the services and my office who are looking across the wide spectrum of defense business activities to see if there are other activities that would lend themselves to being included in this type of funding.

We have basically set three criteria. One is that we can identify the output of a business area. You would think that would be simple, but when we ask people to identify the output of an activity, it is surprising how much time it takes for us to get that identity out of some of the business. Some of them are easy, but some of them are much more difficult.

Second, we need a cost accounting system in place for these activities; and finally, we need to be able to identify their customers. And when all three criteria have been met by an activity, we will include them in the DBOF. So in future years, you would expect to see some growth in the activities that are put under this type of funding.

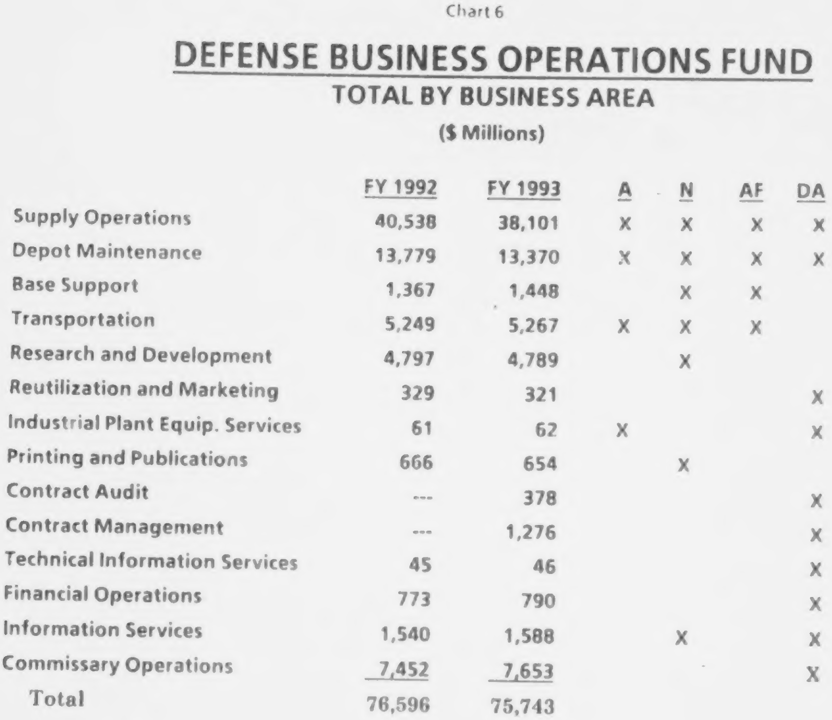


Chart 6

DEFENSE BUSINESS OPERATIONS FUND

TOTAL BY BUSINESS AREA

($ Millions)

	FY 1992	FY 1993	A	N	AF	DA
Supply Operations	40,538	38,101	X	X	X	X
Depot Maintenance	13,779	13,370	X	X	X	X
Base Support	1,367	1,448		X	X	
Transportation	5,249	5,267	X	X	X	
Research and Development	4,797	4,789		X		
Reutilization and Marketing	329	321				X
Industrial Plant Equip. Services	61	62	X			X
Printing and Publications	666	654		X		
Contract Audit	---	378				X
Contract Management	---	1,276				X
Technical Information Services	45	46				X
Financial Operations	773	790				X
Information Services	1,540	1,588		X		X
Commissary Operations	7,452	7,653				X
Total	76,596	75,743				

Finally, just a list, so you can see the types of activities in the DBOF. The X's indicate which service would include these. These are essentially the existing industrial funds and stock funds with a few exceptions in the defense agency column.

And you can see that we have had some inconsistency in the past and we have not changed that yet because we are still studying the issues. For example, in the past, only the Navy R&D labs have been in the industrial fund and that is why you would only see an X there under Navy.

So we have a task group now looking with the Navy and the Army and the Air Force, to see if this really applies across the board and whether all three of them should be included in that account.

That was all I was prepared to talk about in advance, Mr. Chairman. I think we will get a significant improvement in the operations of the department this way. I think we will provide better visibility to members of this committee and better visibility to managers within the Department of Defense.

And as a father, I know I have kind of an emotional involvement with this child, but I would hope that the committee would see fit to endorse our proposal for fiscal year 1992.

[The prepared statement of Mr. Shycoff follows:]

PREPARED STATEMENT BY DONALD B. SHYCOFF, PRINCIPAL DEPUTY COMPTROLLER, DEPARTMENT OF DEFENSE

Mr. Chairman and members of the committee, I appreciate this opportunity to appear before you today and to discuss the Defense Management Report decisions and their impacts. In addition, I want to address the Department's proposal to establish the Defense Business Operations Fund, or DBOF, as it has come to be known. My objective is to lay the groundwork for an understanding of the Defense Management Report initiatives and discuss the Defense Business Operations Fund concept and substance in more detail. In addition, I will provide an overview of the fiscal years 1992-1993 request for the Operation & Maintenance (O&M) accounts.

I want to begin by providing some background and an overview of the Defense Management Report approach and the projected overall savings. I will then follow with a discussion of the Defense Business Operations Fund.

DEFENSE MANAGEMENT REPORT

As you are aware, the Department faces major challenges over the next several years as the Defense share of the Federal budget declines. Reflecting the budget levels approved in the Budget Summit Agreement enacted last fall, the overall Defense budget after adjusting for inflation drops 12 percent in fiscal year 1992 from the fiscal year 1990 enacted level. Thereafter it decreases in real terms about 3 percent per year. By fiscal year 1995, the cumulative reduction in real program is about 22 percent. In his February 1989 address to Congress, President Bush called for DOD management improvements.

The Department completed the Defense Management Report (DMR) in July 1989. Further it set substantial dollar savings targets at—least $30 billion, for management improvements beginning in fiscal year 1991 and continuing at least through fiscal year 1995. The report called for full implementation of the Packard Commission recommendations, improved performance of the DOD acquisition system, and more effective management of Defense resources.

The implementation of the Defense Management Report is founded in the principle that the Department "should centralize policies, procedures and standards, and systems, while decentralizing implementation and execution. A major achievement of DMR is restructuring organizations to accomplish $70.9 billion in savings. The savings by category are as follows: Initiatives to streamline data automation services are expected to save $7.3 billion. Savings of $2.2 billion are anticipated from efficiencies in financial management. Better procedures for managing contracts and reduced advisory assistance services will save $3.3 billion. A number of initiatives will improve logistics systems and save $43.4 billion through fiscal year 1997, $27.9 billion for supply systems, $9.6 billion for depot maintenance, and $5.9 billion for other logistics. Improved management over acquisition support is expected to save $6.3 billion, while the remaining items will result in $8.3 billion in savings.

The savings to be realized when these actions are fully implemented are $13.6 billion annually. We anticipate that these savings will begin to be fully recognized by fiscal year 1995, and have designated this our "steady state" year. The steady state savings for the previously mentioned categories is as follows: streamlining data automation services is expected to save $1.2 billion; savings of $0.4 billion are anticipated from efficiencies in financial management; better procedures for managing contracts and reduced advisory assistance services will save $0.5 billion; $8.5 billion in savings will result from logistics improvements, broken down to be $5.5 billion for supply systems, $1.9 for depot maintenance, and $1.1 for other logistics; acquisition support management improvements will save $1.4 billion; while the remaining items will result in $1.5 billion in annual savings. Within these steady state savings are savings of $4.4 billion resulting from the reduction of 50,000 civilian and 44,000 military personnel.

DMR savings contributed to DOD's overall effort to bring the Defense budget down to the budget summit levels. From the fiscal year 90 (plus inflation) baseline, the fiscal years 1992-97 plan represents a $410 billion reduction. Of this $410 billion reduction, DMR initiatives make up about 17 percent of the savings with the remainder coming from force structure and program cuts.

If DOD had not embarked on the DMR initiatives, the Department would have had to cut forces and programs below levels considered prudent to support viable national security strategy.

OPERATION AND MAINTENANCE

I would now like to provide a brief overview of our O&M requests.

For fiscal year 1992/fiscal year 1993, the O&M budget request at the title level is $86.4/$84.6 billion in total obligational authority. The fiscal year 1992 amount decreases by $1.2 billion when compared to the fiscal year 1991 funding level of $87.6 billion (includes supplemental funding of $2.6 billion for increased fuel prices). The O&M request in fiscal year 1993 decreases by an additional $1.8 billion. After adjusting for inflation and considering funding realignments that occur between the O&M accounts and other appropriations, the O&M program decreases by 4.8 percent in fiscal year 1992 and 3.9 percent in fiscal year 1993.

The lower O&M funding levels are reflective of major reductions in force structure and management initiatives to reduce costs, continued funding of readiness training at approximately current levels, and minimal growth in selected programs. Before further discussing the O&M program, however, I would like to address key pricing assumptions.

Price growth amounts reflected in the fiscal year 1992 budget provide for the annualization of the fiscal year 1991 civilian pay raise of 4.1 percent and a civilian pay raise of 4.2 percent effective January 1, 1992. Similarly, price growth for fiscal year 1993 includes annualization of the fiscal year 1992 pay raise and a civilian pay raise of 4.7 percent effective January 1, 1993.

For the other purchases category, the O&M request is based on inflation rates consistent with OMB guidance. These rates are 3.9 percent/3.7 percent in fiscal year 1992/fiscal year 1993. The comparative rate budgeted for fiscal year 1991 is 4.2 percent. The other purchases rate is used whenever we do not have specifically developed rates such as for fuel, other stock fund and industrial fund purchases, and civilian personnel.

The Defense Business Operations Fund reflects stabilized individual rates which are set for each activity group. These rates vary according to the circumstances of each activity group. The rates are generally higher in fiscal year 1992/fiscal year 1993 with stock fund rates ranging from -26.2 percent to +10.8 percent. Industrial fund rates range from -17.4 percent to +23.1 percent.

In terms of foreign currency rates, the fiscal year 1991 estimate is based on those rates approved by the Congress for execution. The fiscal year 1992/fiscal year 1993 estimate is based on foreign currency rates experienced in December 1990. For example, the ratio of the Deutsch Mark to the U.S. dollar is set at 2.03 in fiscal year 1991 and 1.51 for fiscal year 1992/fiscal year 1993.

Turning now to the O&M program, I will first address highlights of the planned force structure reductions.

The Army force structure will continue the downward trend begun in fiscal year 1990 with the inactivation of two Active divisions in fiscal year 1992 and two Reserve divisions in fiscal year 1993. By fiscal year 1995, Army divisions will consist of 12 Active, six Reserve, and two Reserve cadre divisions—down from 18 Active and 10 Reserve divisions in fiscal year 1990.

For the Navy, Ship Battle Forces total 528 in fiscal year 1991 and 477/464 in fiscal year 1992/fiscal year 1993. By fiscal year 1995, Ship Battle Forces decrease to 451. The Marine Corps begins implementing the phaseout of one Marine Expeditionary Brigade which is scheduled for completion by fiscal year 1995.

The Air Force reduces its Tactical Fighter Wing Equivalents (TFWE) from 33.5 in fiscal year 1991 to 29.0/27.4 in fiscal year 1992/fiscal year 1993 and transfers additional KC-135 and F-15 interceptor aircraft from the Active to the Reserves. By fiscal year 1995, TFWEs decrease to 26.6. The Air Force also begins an ICBM force structure reduction as Minutemen II missiles are retired.

As the force structure shrinks personnel levels decline across the board. Active military personnel decrease from 2.1 million in fiscal year 1990 to 1.7 in fiscal year 1995—a drop of 20 percent. Similarly, Reserve military personnel decrease from 1.1 million to .9 million. The civilian workforce decreases from 1,073 thousand in fiscal year 1990 to 940 thousand in fiscal year 1995.

Aggressive management initiatives to reduce Defense costs are also a major feature of the fiscal year 1992/fiscal year 1993 budget. One of these initiatives is the continued implementation of funding Depot Level Reparables (DLRs) in O&M. Building on Navy experience, the Department began a process in fiscal year 1991 to fund Army and Air Force DLRs in O&M. When fully implemented, the operating forces will pay for the costs of repair parts rather than obtaining them as free issues. For fiscal year 1992, the budget provides the Army and Air Force O&M customer with $1.0 billion to purchase DLRs for the latter half of the fiscal year. To provide for a full year of funding DLRs, the fiscal year 1993 request increases by $1.9 billion.

Turning now to other program highlights, readiness training continues to be a high priority Defense program. The Army ground and air training operations will continue at the fiscal year 1991 level of 800 miles for combat vehicles and 14.5 flying hours per month per tactical aircrew. Similarly, Navy steaming days will continue at 50.5/29.0 days per month for the deployed/nondeployed fleets while the tactical air Primary Mission Readiness (PMR) rates will remain at 85 percent. The Air Force tactical aircrew flying hours are 19.3/18.2 in fiscal year 1992/fiscal year 1993 compared to 18.9 in fiscal year 1991.

Not all O&M programs, however, are coming down. In a number of select areas, O&M program requirements continue to increase. The fiscal year 1992/fiscal year 1993 O&M budget provides additional funding for the Environmental Restoration, Defense appropriation, increasing from $1.1 billion in fiscal year 1991 to $1.3/$1.5 billion in fiscal year 1992/fiscal year 1993. Further, the service budgets for environmental compliance increase from $.9 billion in fiscal year 1991 to $1.4/$1.3 billion in fiscal year 1992/fiscal year 1993. The budget also continues implementation of the President's National Drug strategy with funding increasing to $1.2 billion in fiscal year 1992/fiscal year 1993. The CHAMPUS and in-house medical programs increase from $7.6 billion in fiscal year 1991 to $8.0/$8.4 billion in fiscal year 1992/fiscal year 1993.

The Defense Agencies appropriation reflects an increase in fiscal year 1992 of $305.9 million and a decrease of $1,211.6 million in fiscal year 1993. These amounts are primarily the net results of increases for price growth and Depot Level Reparable requirements for USSOCOM as offset by the shift of funding responsibilities for various functions to the Defense Business Operations Fund (DBOF). For example, in fiscal year 1992 all management and support functions of the Defense Logistics Agency (DLA) are transferred to the DBOF ($467.7 million). The DBOF will recover the cost of these supply management and support functions through rates which will be charged primarily to O&M customers. Additionally, as discussed earlier the contract management function of the Defense Logistics Agency's (DLA) and the Defense Contract Audit Agency are expected to be included in the DBOF in fiscal year 1993.

DEFENSE BUSINESS OPERATIONS FUND

In order to realize efficiencies and improve the quality of support provided by Defense industrial facilities to the operating forces, the fiscal years 1992–1993 budget proposes the establishment of the Defense Business Operations Fund (DBOF). DBOF is primarily an expansion of the current revolving fund concept to a larger number of Defense support activities. The services and Agencies which oversee DBOF activities will continue to have all management responsibilities. Since the DBOF will operate under many of the policies and procedures currently in place for revolving funds, no major technical changes will result from this proposal.

Commencing in fiscal year 1992, the DBOF incorporates the activities previously funded in the stock and industrial revolving funds. These operations include: depot maintenance, supply operations, transportation, Air Force laundry and dry cleaning, DLA clothing factory, and the Navy's public works, research and development, printing and publication, and data processing operations. In addition, the Defense Finance and Accounting Service (DFAS), the Defense Commissary Agency (DeCA) and three Defense Logistics Agency (DLA) functions (the Defense Technical Information Center (DTIC), the Defense Reutilization and Marketing Service (DRMS), and the Defense Industrial Plant Equipment Center (DIPEC)) are included in the DBOF.

We will examine all of the remaining support activities over the next few years to determine if they meet the criteria to be in a revolving fund. The criteria include identifiable outputs or products, a cost accounting system in place, and identification of the customers for the products. Examination of the various business areas is being accomplished by study groups comprised of representatives of the affected components, OSD functional offices, and my office.

There are a number of benefits associated with expanding the revolving fund concept to additional support activities. Currently, over 50 percent of operation and maintenance and military personnel costs are budgeted in support functions where funds are justified and requested separately from the operating forces. While cost models are sometimes used to estimate support costs during force level decisions, these allocations are not visible in the financial management system and are not used during execution of programs or in many budget decisions. Use of revolving fund management provides all levels of management with visibility of the true cost implications of management decisions. As additional support activities are transferred to the DBOF, the Department moves towards mission budgeting, better expressing support requirements in operational terms and costs.

The majority of the procedures necessary to implement DBOF will be based on those developed during the last 40 years for the industrial funds. The originator of support requirements, the operating forces, will identify the amount of support necessary to meet assigned mission responsibilities. The operating forces budget will include the funding necessary to buy this support from available suppliers, including Defense industrial activities. The Defense industrial activities will establish prices to cover approved costs, based on the identified workload. Budgets for the industrial activities will identify expected workload, customers and costs. In order to ensure that programs are executed as planned and budgeted, these prices will remain fixed for the year of execution.

The one significant change, and an essential ingredient to capturing the total costs of operating a business area and including true costs in prices charged to customers, is the introduction of capital budget principles. The approved costs for each DBOF activity will include capital requirements for equipment and construction. Congressional oversight and control of construction projects remain essentially unchanged from fiscal year 1991 and prior years. Funding for the major construction projects included in the DBOF capital budget continues to require specific authorization in the Military Construction Authorization Act before work can begin.

Capital budgeting provides a significantly improved linkage between our investment programs and the operations that the investment is intended to benefit. Capital budgeting will provide visibility as to the true cost of an operation which allows both the customer and review organizations to make more informed decisions. Capital budgeting requires benefits to be identified prior to obtaining project funding and ensures that the Department and the Congress will have the visibility to determine if, in fact, the benefits have been realized.

The DBOF will provide significant benefits leading to improved support at a lower cost. One of the benefits of having the customers request appropriations to "buy" their support costs from the DBOF is that it will provide the operating forces better visibility of the true costs of their operations. Customers will be charged for the cost of industrial and commercial-type services. In order to create a customer/provider relationship between the operating forces (the customer) and the support establishment (the provider), improved information and a structure that supports this relationship are required. The mechanism provided through DBOF achieves the desired result.

The costs of support activities in the DBOF will be monitored through the collection of cost per output data using business-type accounting systems. The cost goals established for support activities in the DBOF will include the total cost of their operations. Operating in a revolving fund will provide managers of business areas in the DBOF greater flexibility to make tradeoffs between elements of expense.

Mr. Chairman, we could incorporate most of the procedural changes through the existing revolving fund structure. However, I believe that there are a number of significant benefits in collapsing the existing eight revolving funds into one. The most significant is the ability to reduce the tremendous volume of financial transactions between the various business areas, without affecting the visibility of costs or the structure of the amounts authorized and appropriated. Approximately $20 billion worth of business is among fund activities. Because all of the businesses are in the same fund, intra-fund information transactions can be utilized instead of the more expensive expenditure transactions. While this will not happen overnight, in the long run we expect to realize significant reductions in accounting workload because of this account consolidation.

Reduced emphasis on accounting and increased attention to the cost of operations refocuses managers to think in business terms. The name change to DBOF is an added signal to DOD managers and the Congress that the Department takes seriously the DMR goals to improve the performance and lower the costs of the support establishment through managing in business terms, the equivalent of profit and loss statements.

Mr. Chairman, in the past few weeks it has become evident to me that there are a number of misconceptions about the DBOF. I would like to spend the next few minutes clearing up those misconceptions:

- *Misconception No. 1. DBOF is going to be managed in OSD.* That we are consolidating DBOF management in our office. Nothing can be further from the truth. OSD is a policy office, not an operational manager. These activities will be managed by the Military Departments and Defense Agencies just as they have in the past.
- *Misconception No. 2. There is a lack of information available to the Congress about the DBOF.* Mr. Chairman, we have provided your staff what I believe is the most comprehensive display of information on the individual business areas that the

Department has ever provided to the Congress. We have given you more and better information than ever before.

For each business area we have provided information on the level of business activity, the number of personnel, the value of the orders received, the work on hand, the amount of inventory, and the revenue received. We have provided actual data for fiscal year 1990, and estimated data for this year, 1992 and 1993. We have provided detailed justification of the equipment and construction projects included in the DBOF budget.

I have had a sample of the submission for one of the business areas—Depot Maintenance—distributed for the committee's examination to demonstrate what we have provided. I am sure that you will agree that creation of the DBOF is not an attempt to reduce the information we provide to the Congress.

- *Misconception No. 3. Congress cannot influence or exercise oversight.* I believe the record is quite clear from previous congressional actions concerning the Industrial and Stock funds that the Armed Services and Appropriations Committees have not found it difficult to exercise oversight over those activities. With the improved information available to the committee your ability to exercise your oversight responsibilities should be enhanced.
- *Misconception No. 4. DBOF means consolidation of various business areas such as Supply Depots, Depot Maintenance, etc.* Mr. Chairman, there is obviously a great deal of confusion on this subject, since many of the same areas are affected. It is true that this initiative and many of the other DMR initiatives, have a common goal. That is, improvement in the management, the quality of the output, and reduction in the cost of doing business in the DOD support establishment. However, that is the only link. Each of the initiatives are independent. As I have outlined in other parts of my statement, we should provide our managers a more business-like financial system, more tools to manage with, and more responsibility for the management of their activities. This should be done, regardless of their location in the DOD structure.
- *Misconception No. 5. DOD does not have the necessary cost accounting system to implement DBOF.* The Industrial Funds were first established in 1951. They have well established cost accounting systems that have served the local managers very well. I am deeply aware that, as with most of our accounting systems, we need to make improvements in these systems. There is absolutely no reason that we should forego the benefits that can be gained from the establishment of the DBOF while we improve these systems. The systems can be improved within the DBOF just as well as in the Industrial Fund.
- *Misconception No. 6. We are moving too fast.* The DBOF is primarily a name change since it includes predominantly those activities already managed in revolving funds. The few new businesses identified for DBOF in fiscal year 1992 are Defense Agency activities identified for conversion to industrial funds and represent less than 2 percent of the DBOF total. Customer operations remain unaffected. The only impact on their budgets is the inclusion of financing for capital investments—the benefits of which have already been discussed.

We believe the changes to the way the Department does business will improve managers' incentives to reduce costs in a number of ways. First, under the DBOF concept, support activities will be funded based on their requirements to meet customer demands. This is aimed at reversing the current mind-set among many managers to spend every dollar available to them this year for fear that they may not get as much next year if they do not spend it all. It establishes a view that greater efficiency and smaller budgets should be a matter of pride on the part of support managers. Second, managers will have increased accountability for their decisions as the total cost of their decisions will be visible under the proposed system.

Congressional oversight and control of the Defense support establishment will be enhanced under the DBOF because Congress will receive better information about the nature and cost of DOD commercial-type activities. This will be accomplished by preparing financial statements in the same manner as a commercial endeavor. The statements will provide a picture of both operations and investment costs that will inform Congress not only how much is being spent to perform support missions, but also how efficiently these missions are being performed.

We believe the Defense Management Review process and the Defense Business Operations Fund will reduce costs without reducing the readiness of the Armed Forces. Savings resulting from these actions allow the DOD to reduce expenditures, maintain levels of readiness and service, and absorb staff reductions driven from increasingly constrained resources. These review efforts will continue with another round of DMR reviews. Given the probability of a declining topline for defense funding, every dollar we save in the support establishment, while still providing the same quality level of support, means another dollar will be available for flying and steaming hours critical to force readiness.

In summary, the Department has met the challenge of changing world conditions and sharply reduced available funding by reducing force structure, by pursuing aggressive management actions to increase cost consciousness, by maintaining a ready force, and by providing additional funding where essential. Mr. Chairman and members of the committee, this completes my statement, and I am prepared to answer any questions that you may have.

Senator DIXON. Thank you, Mr. Shycoff.

The distinguished ranking member, the Senator from Mississippi, Senator Lott is here. Do you have a statement before we go further, Senator?

Senator LOTT. I have one that I would like to submit for the record right now. It is very brief, Mr. Chairman.

I am delighted to have the panel. I do have some questions that I would want to ask at the appropriate time.

[The prepared statement of Senator Lott follows:]

PREPARED STATEMENT BY SENATOR TRENT LOTT

Thank you Senator Dixon.

I too would like to welcome the witnesses to this hearing today on the Department of Defense Operation and Maintenance programs and the associated funding requests for fiscal years 1992/1993, and in addition the Desert Shield/Desert Storm support.

The national security requirements of the United States are under major review. The O&M support funds must be adjusted to match the new force levels. Fiscal year 1992 will be the first year of direction and funding for this reduction of the U.S. military forces.

Due to past policies and investments in O&M, the United States enjoyed success in the Desert Shield/Desert Storm campaign. We are now going to reverse a great deal of these policies in fiscal year 1992. We should be very careful in making major changes.

From the witness statements for the record, the current logistics and support organizations were major contributors to the Persian Gulf successes. Some of these organizations will be substantially altered and/or eliminated within the next 2 to 3 years. The wisdom of these changes should be examined.

I understand that Defense Management Reviews (DMR) one and two, along with the Defense Business Operating Fund (DBOF) will be discussed today. Because of the increasing number of questions on these issues, I hope we can hold a separate hearing on them. I would like to continue to hold that option open if all issues are not addressed here today or through questions for the record.

I look forward to the witnesses' statements and questions to follow.

Senator DIXON. Thank you. Senator Thurmond has requested that his prepared statement also be made a part of the record. Without objection, it is so ordered.

[The prepared statement of Senator Thurmond follows:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you, Mr. Chairman. I join you in welcoming our distinguished panel to this hearing on the fiscal year 1992/1993 Operations and Maintenance programs.

Mr. Chairman, as you well know, the Operations and Maintenance account provides the funding for the day to day operations of our Armed Forces. This account does not have the benefit of the great lobbying efforts that we associate with the more glamorous defense programs, yet we all know that the Operations and Maintenance account is one of the most critical funding elements that the Armed Services Committee oversees.

During almost 33 years on the Armed Services Committee, my experience has been that many times the Operations and Maintenance account is used as the bill payer for other programs. What results is a reduction in readiness, lower working and living conditions for our soldiers and degradation of our facilities. However, under your leadership, Mr. Chairman, I have seen this trend reversed and the subcommittee has continually provided strong support for this critical funding element. I congratulate you for your steadfastness and support.

In reading the prepared statements, I was particularly dismayed at the continued growth in the backlog of unfunded maintenance. If we continue to tolerate this growing backlog of repair work, I foresee a time when it will no longer be economical to repair some of the facilities or keep the equipment operational.

Mr. Chairman, the bright spot in the Operation and Maintenance funding is that it will continue to provide for the demanding and realistic training that resulted in the exceptionally well trained men and women who gave us the victory over the tyrant Saddam Hussein. As long as we can maintain a trained and ready forced regardless of size, our Nation will be capable of meeting any foe who dares to challenge this great Nation.

Thank you, Mr. Chairman.

Senator DIXON. As I understand it, and the staff can correct me if I am wrong, but my understanding is that the other four witnesses would make very brief remarks, not in excess of 5 minutes, and would be supportive, I guess of what you said, Mr. Shycoff. Is that true?

Mr. SHYCOFF. I am waiting breathlessly, to see how much they are going to support me.

Senator DIXON. Well, they may not be supportive, I did not mean to imply that.

Let us hear them then in whatever order.

Senator LOTT. Mr. Chairman, may I comment on that very point? I hope they would feel free to disagree if they are so inclined.

Senator DIXON. I would certainly agree. I did not mean to imply that they would entirely support what Mr. Shycoff had said. General Arick?

STATEMENT OF BRIG. GEN. J.C. ARICK, USMC, DIRECTOR, FACILITIES AND SERVICES DIVISION, U.S. MARINE CORPS

General ARICK. Good afternoon, Mr. Chairman.

I appreciate this opportunity to discuss with you our 1992 and 1993 Operations and Maintenance budget request, one that we believe will promote a high state of readiness and an enhanced warfighting capability for our Corps.

I will submit my full statement for the record and simply say here that in fiscal year 1992, we are requesting about $1.9 billion, roughly the same dollar figure as this year's program.

Our fiscal year 1993 request of about $1.7 billion is roughly 9 percent less than the program Congress approved for us this year.

Those figures reflect keen competition for scarce resources, among other things, and not a declining emphasis on the readiness and welfare of our forces. They allow us to strike a balance among competing requirements and preserve the war-fighting capabilities that the Congress and the nation have come to expect of us.

Mr. Chairman, as always, your Marine Corps is grateful to you and the committee for your continuing support. I would be happy to try to answer any questions you or the committee may have on our Operations and Maintenance budget request.

[The prepared statement of General Arick follows:]

Prepared Statement by Brig. Gen. J.C. Arick, USMC, Director, Facilities and Services Division, U.S. Marine Corps

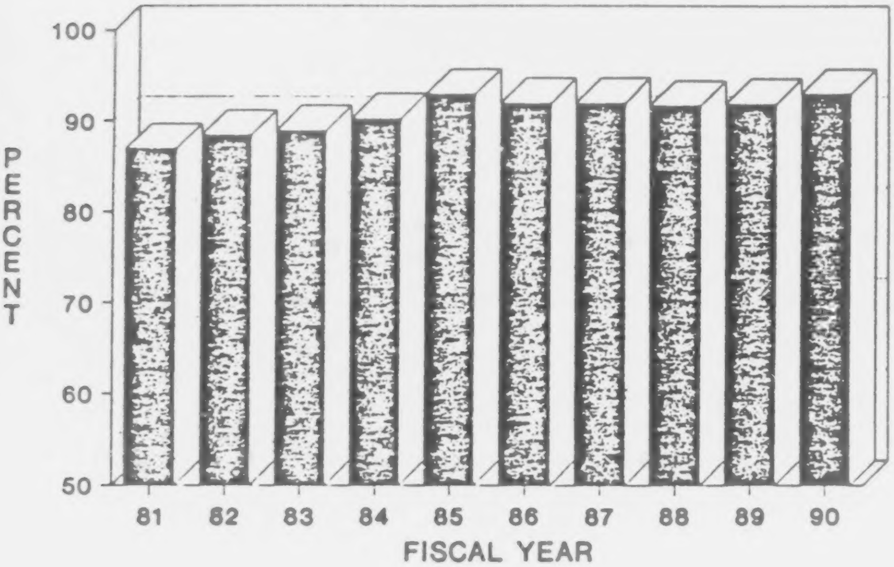
INTRODUCTION

Mr. Chairman and members of the committee, thank you for this opportunity to present the Marine Corps' fiscal years 1992 and 1993 operations and maintenance (O&M) budget request. I would like to express our deep appreciation for your past support; that support has allowed us to maintain the readiness of our combat units at all-time highs over the past several years. Congressional support has been instrumental in enabling us to carry out our most recent forward deployment in support of National Strategy.

The Marine Corps made great strides in military capability and readiness during the 1980s. It is our intent that our capabilities remain at their current level, and in fact that they improve, as we proceed through the 1990s, recognizing of course that force levels will decrease. Our Fleet Marine Forces and their supporting establishment are currently in exceptional condition as demonstrated during Desert Shield and Desert Storm. The capabilities of our forces have derived from application of the principles of responsiveness, flexibility, economy, attainability, sustainability, and survivability. We've made exceptional progress in the following key areas:

Materiel Readiness

FMF MAJOR COMMAND READINESS SUMMARY



Recruiting. We continue to access high quality recruits, young men and women motivated to become marines. Their most recent performance provides testimonial to their quality and the value of our recruiting effort.

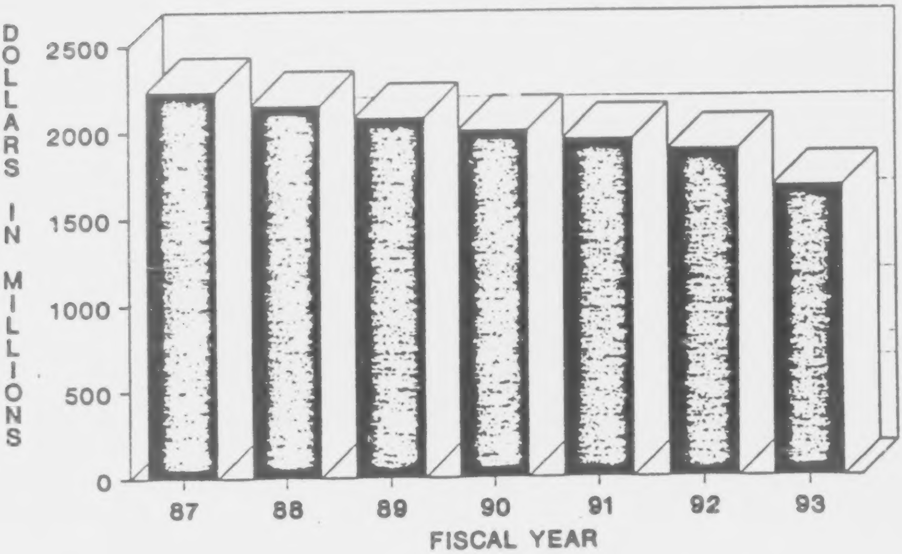
Quality of Life. With the number of dependents now exceeding the number of marines and with the vast majority of our Fleet Marine Forces recently returning from deployment, emphasis on quality of life is essential. Our programs have a direct and positive impact on discipline, esprit de corps and on the readiness of our Fleet Marine Forces. During the past decade, we have vastly expanded our child care services and instituted a corps wide family advocacy program, among many other quality of life undertakings.

Prepositioning Programs. During the 1980s, the Marine Corps began investing in our Maritime Prepositioning Force (MPF) and the Norway Prepositioning program. These now provide a demonstrated rapid response capability that complements our traditional amphibious capability. Within 1 week of tasking last August, ships from the first two of our three MPF squadrons were in the Southwest Asia operating area. Link-up of two brigades of marines with their equipment provided the Commander in Chief, Central Command a credible combined arms force, with sufficient combat power and the necessary sustainment to conduct combat operations during the early stages of the build up of U.S. forces. This was accomplished with less than 10 percent of the airlift sorties required to move a like force had maritime prepositioning not been available. The fiscal years 1992 and 1993 budget requests contain funding to continue these vital programs.

Our fiscal years 1992 and 1993 budget requests take into consideration scheduled force reductions while maintaining funding levels essential for a ready, sustainable, expeditionary warfighting capability. Our present request strikes a balance among competing requirements and will allow us to preserve the capabilities our Nation has come to expect of its Marine Corps. Funding for incremental operating costs related to Desert Shield and Desert Storm are not reflected in our budget submission. Rather, that funding was included in the Secretary of Defense Fiscal Year 1991 Supplemental request. However, reconstitution of our sustainability and prepositioning capabilities, and the associated costs, will carry into fiscal year 1992.

Our O&M budget requests for fiscal years 1992 and 1993 are $1,895 million and $1,739 million, respectively. As the chart below indicates, the downward trend of recent years is accelerating. After accounting for functional transfers and the benefits of increased burdensharing, by fiscal year 1993 there is, in real terms, a decrease of 8.6 percent from our fiscal year 1991 approved funding level.

OPERATION AND MAINTENANCE
FUNDING LEVELS
(FY92 CONSTANT BUDGET $M)



MAJOR CHANGES FROM FISCAL 1991

Our fiscal years 1992 and 1993 budget requests take into account recent Department of Defense management actions designed to realize efficiencies and economies in selected support activities. These initiatives include the establishment of the Defense Commissary Agency and the transfer of Marine Corps finance and accounting functions to the Defense Finance and Accounting Service. Additional efficiencies will also be achieved at our Depot Maintenance Activities as a result of Department of Defense initiatives. Implementation of a Department of Defense "Corporate Information Management" strategy and other related initiatives will provide additional savings reflected in our budget submission. Another source of change from our fiscal year 1991 funding level is the shift of funds in fiscal year 1993 for minor construction and major repair projects from O&M to the Military Construction appropriation. This is the result of a Department of Defense decision to place all facility related investments in construction accounts.

We expect to achieve major savings in support of our forces overseas through the Government of Japan's agreement to increase its burdensharing contribution by paying for 20 percent of the costs of utilities and foreign national indirect hire labor beginning October 1, 1991. By the end of fiscal year 1993, we expect that share to be increased to 50 percent, as reflected in our budget request. We are also making significant reductions (11.8 percent) to our civilian personnel end-strength between fiscal years 1990 and 1994. Our budget reflects these reductions, scheduled to be shared equally by all of our supporting establishment. Recruiting and advertising funds for fiscal years 1992 and 1993 are also lower than the fiscal year 1991 level approved by Congress. Finally, our fiscal year 1992 equipment and real property maintenance programs are also reduced from fiscal year 1991 levels (by $11.6 million and $18.1 million, respectively). We will be capable of maintaining our infrastructure and readiness through the budget years but our unfunded maintenance backlog will continue to grow.

THE FLEET MARINE FORCES

We remain confident that our O&M budget submission preserves the essential capabilities of our Divisions, our Wings, and our Force Service Support Groups. In order to maintain our versatility and our warfighting capability demonstrated graphically during the past year, care has been taken to maintain balance among the ground combat, aviation combat, and combat service support components of both our Active and our Reserve forces. This balance of forces is key to the readiness and sustainability of our Marine Air-Ground Task Forces (MAGTFs).

Reduced funding will limit the number of field exercises we will conduct or participate in during fiscal year 1992. Through the innovative use of resources that remain available, however, we will maintain the high readiness levels our Nation has come to expect of us. We are training and conditioning our command elements to function in an environment that offers a high degree of uncertainty and where the requirement for rapid and abbreviated staff planning capability is the norm. To sharpen our strategic and tactical skills, the Commandant has established a Wargaming and Assessment Center at the Marine Corps Combat Development Command, Quantico. This center provides maximum return on our scarce training dollars in the form of a cost effective compliment to field exercises.

CENTRAL SUPPLY AND MAINTENANCE

This category of O&M pays for the logistics functions that maintain the readiness and sustainability of our weapons and equipment. Our two logistics bases at Albany, Georgia and Barstow, California, perform the integrated materiel management and depot level maintenance for our Total Force; they also manage the supplies and equipment in our Maritime and Geographic Prepositioning Programs. Central Supply and Maintenance also funds subsistence-in-kind, the feeding of our forces.

One project of note in this category is the Computer-Aided Acquisition and Logistics Support (CALS) program. CALS will transition acquisition and logistics processes from a paper-intensive system to a highly automated system that provides for the efficient application of resources and maximizes technology exploitation. Three specific CALS initiatives of note are:

— The "Engineering Data Management Information and Control System" which digitizes engineering drawings to reduce reproduction requirements and the cost of work packages for contract solicitation;

— The "Electronic Technical Publication System" which edits, stores, revises, and prints technical manuals; and

— The "Logistics Support Analysis Record" that allows logistics requirements to influence design early in the acquisition process.

The Marine Corps Depot Maintenance Corporate Business Plan is another project aimed at achieving long-term efficiencies. This plan establishes the Marine Corps Maintenance Corporate Business Office to oversee our depot maintenance activities and provide a highly responsive, best value source of multi-commodity service to the customer. We project a savings of $14.7 million in depot maintenance operations costs during fiscal years 1991-1995 through:

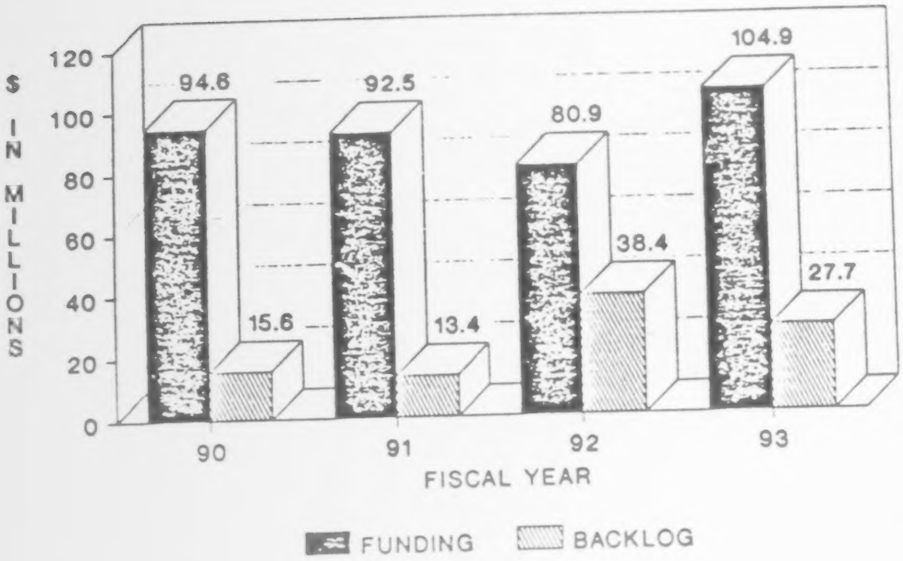
— Increased interservicing;

— Increased efficiency in depot utilization; and

— Public vs. private and public vs. public competition.

The following chart shows funding levels and associated unfunded backlog for equipment maintenance through fiscal year 1993.

DEPOT MAINTENANCE FUNDING
(DOLLARS IN MILLIONS)



TRAINING AND EDUCATION

Our emphasis on combat realism in our training programs will continue in earnest in fiscal years 1992 and 1993. Marine Battle Skills Training is a comprehensive program designed to develop and sustain a marine's combat skills; it is our program's centerpiece and provides additional time in the field for our recruits during their basic training. Following recruit training, all male marines attend the School of Infantry at either Camp Pendleton or Camp Lejeune. This 4-week course provides training in individual infantry skills, small unit tactics, and crew-served weapons.

The Commandant of the Marine Corps has emphasized that every marine must be educated and proficient in the science and the art of warfighting. Accordingly, every marine officer and noncommissioned officer participates in our professional military education program by attending either a formal school or by participating in a structured, self-study program. The Marine Corps University is the cornerstone for the professional military education program. The University includes Non-Commissioned Officer Schools, Staff Non-Commissioned Officer Academies, The Basic School, the Amphibious Warfare School, the Command and Staff College, The School of Advanced Warfighting and The Art of War Studies. In fiscal year 1992, we plan to expand the Marine Corps enlisted professional military education program to require the attendance of all newly promoted Non-Commissioned Officers and Staff Non-Commissioned Officers at the appropriate school.

RECRUITING

Fiscal year 1990 proved to be another very successful recruiting year for the Marine Corps. Not only did we exceed our Total Force accession requirements, but the overall quality of our new marines, both officer and enlisted, was superb. Similarly, fiscal year 1991 looks very promising as we continue to attract high caliber applicants.

Despite our past successes and anticipated force reductions, serious challenges still face our recruiting force. To overcome these challenges and to allow an all-volunteer Marine Corps to continue to serve the Nation as well as it has in the past, we must be capable of conducting a program that remains robust even in the face of diminishing defense dollars.

BASE OPERATIONS

A modern, high quality supporting establishment infrastructure is essential to the readiness of our Fleet Marine Forces. Our supporting establishment provides housing, messing, training areas, ranges, and other essential facilities and services to our marines and their dependents. This infrastructure is essential to your corps' mission capability, productivity, readiness, and sustainability, and the quality of life it produces has an encouraging and highly visible impact on morale and retention.

We continue to husband our scarce manpower resources by ensuring that marines are efficiently and effectively utilized in our operating forces. For example, this budget request continues to fund civilian contractor support in our mess halls in order to relieve marines of garrison mess duty and make them available for mission related activities.

We continue to move toward congressional goals for increased appropriated funding and more staff positions for our child development services. We are focusing on standardized services at all bases, expanded training programs, and total compliance with all regulations through vigorous inspection and procedures. Our ability to accomplish these important goals is limited only by the shrinking defense budget.

Our budget request also includes funding for crucial environmental programs at our bases and stations. Our responsibilities in this critical area are well understood.

To ensure that we protect the investment in our aging facilities, we continue to carefully prioritize our projects and channel available resources into projects that are mission essential. We consider the maintenance and improvement of the quality of life of our marines and sailors to be mission essential, as well as the maintenance of our facilities and the extension of the useful life of our infrastructure.

SUMMARY

Our budget request for fiscal years 1992 and 1993 balances scarce resources among keenly competitive requirements. Difficult decisions were necessary to ensure that resources requested of the Congress are efficiently and economically utilized to train and equip our marines and sailors for global service. Our Nation has come to expect a flexibly organized, versatile, expeditionary Corps of Marines; we believe this budget request will provide just that. It will:

Assure a high state of readiness for our Total Force.

Provide training and support that fosters the development of unit skills, integrity, and cohesiveness necessary for us to be able to deploy and employ disciplined and effective combat, combat support, and combat service support units.

Continue to place emphasis on our prepositioning programs.

Provide for a growing professional military education program.

Provide for the efficient operation of our bases and stations and contribute significantly to the quality of life of our marines and sailors and their families.

Protect our natural resources.

Provide the resources essential to attract quality recruits and retain quality marines.

Mr. Chairman, thank you for the opportunity to review with you and the committee our operations and maintenance budget request for fiscal years 1992 and 1993. We deeply appreciate your past support, and you can be certain that your support for this request will yield, as in the past, a highly responsive and superbly effective combat ready Corps of Marines.

Senator Dixon. I thank you very much, General. Admiral Hancock?

STATEMENT OF REAR ADM. WILLIAM J. HANCOCK, USN, DIRECTOR, OPERATIONS DIVISION, U.S. NAVY

Admiral Hancock. Yes, sir, Mr. Chairman and Members of the committee, it is my pleasure to appear before you today to discuss the Navy's 1992 and 1993 budget request for Operations and Maintenance.

This committee, as the General indicated, has always been an ally in protecting Navy readiness and I look forward to working with you to that end again this year.

As the new world emerges, we continue our adaptation to the future, making adjustments in mission and capabilities. While undeniable fiscal pressures have resulted in a reduction in resources, emphasis must remain on forces which are flexible, well-manned, well-trained, well-equipped and able to respond rapidly, and with the sufficiency of strength to the challenges to our national interests.

Our superb readiness and sustainability demonstrated with Desert Shield and Desert Storm could not have been achieved without the sound decisions and strong support over the last decade from this committee and the others which enabled us to have the well-trained men and women that were so valuable to us in Desert Shield.

That crisis also demonstrated our requirement for forward deployed, available Naval forces. The ships we had in the Eastern Mediterranean and in the Indian Ocean rapidly responded with the early arrival of the *Eisenhower* and *Independence* carrier battle groups, to give the President leverage in that crisis.

Despite the decline in budget resources, we have continued to emphasize readiness. Consequently, much of the required decline has been accommodated by means for force structure reductions and the associated continuation of congressionally directed reductions to military and civilian personnel.

The intent has been to maintain a smaller but fully ready and qualitatively more technological force. With this intent, resource declines have also been aggressively addressed by management initiatives, many the product of the Defense Management Review, DBOF, which is a part, which Mr. Shycoff has described in some detail today.

Our budget continues the trend of a greater portion of the total dedicated to the operating accounts. This has allowed for an acceptable level of force readiness in an austere fiscal environment, at the expense of the investment accounts.

The proportion of our budget dedicated to day-to-day operations, which not long ago constituted about half of our total budget now stands at 60 percent in 1992 and 1993.

As always, the extent to which we can successfully address problems that emerge during execution depends in large part on the flexibility allowed us in using those authorized funds. We will hope that you will continue to minimize restrictions limiting the use of those funds.

That having been said, I would be happy to respond to any questions.

[The prepared statement of Admiral Hancock follows:]

PREPARED STATEMENT OF REAR ADM. WILLIAM J. HANCOCK, U.S. NAVY, DIRECTOR, OPERATIONS DIVISION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

OPERATION AND MAINTENANCE, NAVY

The request for fiscal year 1992 of $23,679.2 million and $23,922.8 million for fiscal year 1993 will support naval operating forces. This includes the operation and maintenance of ships, aircraft (both Navy and Marine Corps), weapons and support equipment, and the ongoing activity of the Navy support infrastructure. The budget assumes increased burdensharing as allies support more of the cost of regional defense. Funding for a civilian pay raise of 4.2 percent effective in fiscal year 1992 and 4.7 percent in fiscal year 1993, effective January 1 of each year, has been included.

A new activity group entitled Environmental Projects has been established to provide increased visibility for the Department's ongoing environmental protection programs (which include the treatment of hazardous waste and pollution abatement). Beginning in fiscal year 1993, maintenance of real property (MRP) funding for major repair projects and minor construction is transferred from all O&M,N Base operations activity groups to the Military Construction, Navy appropriation.

Strategic Forces. The Strategic Forces budget activity provides for the continuing operations and maintenance of the Navy's Fleet Ballistic Missile (FBM) Force (nuclear submarines, supporting tenders and launch area support ships) and the maintenance and modernization of their strategic weapons systems. Strategic Forces program growth in fiscal year 1992 reflects an increased level of funding for Arms Control Compliance and Verification in support of the Strategic Arms Reductions (START) Treaty, for the new Trident (D-5) weapon system as an additional submarine becomes operational, and for an increase in SSBN inactivations from one to four as more Poseidons are retired. These increases are offset significantly by a drawdown in long-term support funding for Poseidon submarines. Strategic Forces growth between fiscal year 1992 and fiscal year 1993 supports the overhaul and refueling of the U.S.S. *Ohio* (SSBN-726) Trident submarine, and an increase in SSBN inactivations from four to six.

General Purpose Forces. The Navy's General Purpose Forces mission is to provide combat ready fleet forces capable of conducting strike operations and ensuring control of the sea and air in event of war, and to maintain a network of shore installations and commands. These forces deploy to the Indian Ocean, Northern, Eastern and Western Pacific, North Atlantic, Central and Eastern Mediterranean, and Caribbean and Central American regions. Fiscal year 1992 and fiscal year 1993 estimates for ship and aircraft operations are based on peacetime (pre-Desert Shield/Storm and pre-Earnest Will) operating force levels.

Funding for Aircraft Operations declines in fiscal year 1992 due primarily to the full standdown of an active carrier airwing (which began stand down in fiscal year 1991). Ship Operations funding remains relatively constant in fiscal year 1992 and fiscal year 1993 despite declines in force levels. This is due primarily to the increased cost of nuclear core reprocessing required for both the inactivation and the refueling of nuclear powered units in the fiscal year 1991 to fiscal year 1993 timeframe.

Ship Maintenance funding increases in fiscal year 1992 and fiscal year 1993. In fiscal year 1992, funding for inactivation of ships increases to reflect the impact of additional accelerated force structure retirements. In addition, funding for depot level repair increases to reflect the impact of industrial fund rate changes as well as more complex and/or additional overhauls.

Fleet support includes funding for special combat forces, construction operations, fleet electronic command and control, cruise missile, and undersea surveillance. Funding increases for Special Combat forces support operation of 15 additional Landing Craft Air Cushion (LCAC) vehicles in fiscal year 1992 and twelve additional LCACs in fiscal year 1993.

Intelligence and Communications These programs provide for collection, analysis and dissemination of intelligence, meteorological and oceanographic data, and communications support for the naval community. Fiscal year 1992 and fiscal year 1993 reflect minimal growth largely due to classified increases in intelligence programs. This growth is offset by savings in telecommunication costs due to a review of circuit requirements and a decrease in leased satellite costs as the DON replaces leases with government owned assets.

Airlift and Sealift. The Strategic Sealift program provides the ability to store and rapidly move supplies and equipment overseas on cargo ships and tankers to potential areas of deployment, and ensures that strategic sealift ships, cargo offload systems, and theater logistic systems are available to provide a smooth flow of material to support combat operations worldwide. The fiscal year 1992 and fiscal year 1993 programs reflect very little growth over the fiscal year 1991 level, and does not reflect the increase in Airlift/Sealift costs associated with Desert Shield/Desert Storm operations.

Central Supply and Maintenance Activities. These programs provide supply, maintenance, technical, and other logistics support to the operating forces. The budget estimates for fiscal year 1992 and fiscal year 1993 reflect major reductions in these programs. With the exception of environmental protection and increased levels of support for the Aegis weapon system to reflect the increased numbers of operational assets, virtually all programs have been decreased. Starting in fiscal year 1992 commissaries have been consolidated as a Defense Agency. Aircraft depot maintenance reductions will result in increased numbers of aircraft and engines overdue for maintenance. Additional management attention will be required to ensure that fleet operations are not adversely impacted. Funding for subsistence decreases in fiscal year 1992 and fiscal year 1993 in consonance with military personnel end strength reductions. The overall decrease in fiscal year 1992 in this budget activity is offset as a result of reflecting the DBOF capital investment strategy in the DBOF customer accounts.

Training, Medical and Other General Personnel Activities. These programs provide training and education, health care, and other support to naval personnel. The fiscal year 1992 request for training programs includes the shutdown of one nuclear power training prototype plant, reductions in pilot and naval flight officer training associated with increased minimum Active duty service obligation and retention experience, and accession and training throughput decreases due to Navy end strength reductions. These trends continue in fiscal year 1993 but are partially offset by an increase associated with the addition of a second Moored Training Ship.

The fiscal year 1992 and fiscal year 1993 request for medical programs reflect fully funded CHAMPUS requirements, consistent with budgeted in-house workload capabilities and current beneficiary population projections. The year-to-year growth in this area is a direct result of CHAMPUS estimates. Funding for Military Treatment Facilities (MTF) is reduced to reflect a declining Active duty beneficiary population, savings associated with a more aggressive third party collection program, and the impact of several Asian nations (primarily Japan) assuming more financial responsibility for the costs of military treatment facilities in the region.

The funding growth in General Personnel Activities is primarily the result of funding child development activities and family centers in one budget activity (BA) instead of several O&M,N BAs. This increase has been partially offset by a reduction in the amount budgeted for recruiting and the determination that the Naval Home should not be funded in the O&M,N appropriation. Beginning in fiscal year 1992, the source of funding for the Naval Home will now include monthly deductions from military pay and a percentage of fines and forfeitures adjudicated against Navy and Marine Corps personnel.

Administrative and Associated Activities. This program includes funding for staff offices of the Secretary of the Navy and the Chief of Naval Operations, and provides service-wide support in the financial, legal, and personnel areas. Funding for these programs remains relatively level from fiscal year 1991. Beginning in January 1991, the primary Navy accounting activities transfer to the newly established Defense Finance and Accounting Service. This transfer does not reduce the funding required since the new activity is part of the Defense Business Operations Fund and the Navy is required to pay that activity to perform the required accounting. Since all costs of operations, including investment equipment and military personnel, are included in the customer rates, funding requirements increase in fiscal year 1992 to finance the costs of this activity.

Support to Other Nations. This budget activity provides funding for the Latin American Cooperation Program, emergency medical travel for certain Navy personnel and their families, the Technology Transfer Program, and the Unified Commanders cooperative programs and exercises with friendly nations.

Table 1 provides financial data for the Operation and Maintenance, Navy appropriation.

TABLE 1.—Department of the Navy, Operation and Maintenance, Navy

[In millions of dollars]

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Strategic Forces	1,589.7	1,640.6	1,760.6	1,928.4
Trident Program	89.7	99.3	93.1	93.5
Strategic Weapon Systems	804.0	827.8	871.1	909.3
Ship Operations	87.3	91.6	85.1	80.4
Ship Maintenance	312.1	357.8	437.7	587.1
Fleet Support	126.1	121.4	131.4	121.2
Base Support	167.7	137.4	136.5	131.5
Environmental Protection	2.7	4.0	4.2	4.2
Claims and Military Const. Support		1.4	1.4	1.4
General Purpose Forces	10,306.9	10,220.9	10,359.3	10,355.3
Aircraft Operations	2,108.9	2,346.5	2,190.9	2,223.9
Ship Operations	1,842.9	1,980.5	1,894.0	1,933.9
Ship Maintenance	3,341.9	3,060.0	3,324.3	3,388.6
Combat and Other Warfare Support	261.6	161.9	173.9	187.1

TABLE 1.—Department of the Navy, Operation and Maintenance, Navy—Continued

[In millions of dollars]

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Commands and Staffs	157.7	139.0	129.9	131.9
Fleet Support	446.2	469.0	481.2	500.3
Cruise Missile Support	108.4	119.9	117.5	116.6
Base Support	1,937.8	1,871.0	1,933.9	1,786.7
Environmental Protection	24.6	34.2	60.3	37.2
Claims and Military Const. Support	76.9	53.5	53.4	49.1
Intelligence and Communications	1,125.1	1,207.8	1,224.4	1,229.3
Airlift and Sealift	496.7	447.8	451.9	454.2
Central Supply and Maintenance	6,138.8	5,330.3	4,726.6	4,679.2
Aircraft Maintenance and Engineering	1,640.2	1,757.5	1,569.9	1,475.8
Ship and Weapon System Maintenance and Engineering	1,948.7	1,942.5	1,813.7	1,907.0
Communication and Electronic Maintenance and Engineering	230.2	237.1	203.7	200.8
Facilities Maintenance and Engineering	531.1	542.4	331.4	320.7
Supply System Operations	1,295.5	533.8	459.0	448.8
Other Support	493.1	38.0	28.8	27.2
Military Personnel Subsistence		286.2	320.1	298.9
Training, Med. and Gen. Pers. Activities	4,225.6	4,379.3	4,483.9	4,604.7
Training and Education	1,517.0	1,519.1	1,450.1	1,413.6
Medical Support	2,381.6	2,545.2	2,686.1	2,842.2
General Personnel Activities	327.0	315.0	347.7	348.9
Administration	829.8	654.1	666.5	665.6
Support to Other Nations	6.1	5.8	6.0	6.1
Special Operations	94.4			
Shipyard Modernization	81.0			
TOTAL: Operation and Maintenance, Navy	24,894.1	23,906.6	23,679.2	23,922.8

OPERATION AND MAINTENANCE, NAVY RESERVE

The budget request of $816.1 million for fiscal year 1992 and $797.0 million for fiscal year 1993 will support Reserve operating forces. Funding estimates include a 4.2 percent civilian pay raise effective January 1992 and a 4.7 percent pay raise effective January 1993.

Mission Forces. Naval Reserve forces are declining, in terms of both Reserve ships (54/40/37 hulls in fiscal years 1991/2/3) and aircraft (610/575/552 aircraft in fiscal years 1991/2/3). Ship operating tempo has been reduced from 21 days per quarter in fiscal year 1991 to 18 days per quarter in fiscal years 1992–1993 in line with constrained fiscal resources. The Naval Air Reserve Primary Mission Readiness level is maintained at 87 percent. Ship operation and maintenance funding provides for the new "Innovative Naval Reserve Concept". Also included in this budget activity is funding for intermediate and depot maintenance of Naval Reserve ships and equipment, operational and technical support for Naval Reserve Force ships and aircraft, Special Combat Support Force support, as well as Base Operations Support, Recruiting, Advertising, and maintenance of real property. In fiscal year 1993, funding for major repair and minor construction is transferred to the Military Construction, Navy Reserve appropriation.

Depot Maintenance. The Depot Maintenance budget activity provides for the Reserve aircraft rework program. The fluctuation of resources is tied to the mix of aircraft per year which require depot maintenance based on inspection schedules.

Other Support. The Other Support budget activity contains funding for Reserve Management Headquarters and supports the Commander, Naval Reserve Force, New Orleans, LA, and remains essentially level over fiscal years 1991–1993.

Table 2 provides summary financial data for the Operation and Maintenance, Navy Reserve appropriation.

TABLE 2.—Department of the Navy, Operation and Maintenance, Navy Reserve

[In millions of dollars]

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Mission Forces:				
Air Reserve Forces	270.1	305.6	241.1	243.3
Ship Operations and Surface Support	78.7	87.7	84.3	84.9
Ship Maintenance and Modernization	151.8	199.2	141.9	136.0
Base Operations and Other Support	204.5	211.4	195.9	193.0
Recruiting and Advertising	17.3	15.0	14.5	15.1
Maintenance of Real Property	66.6	77.4	55.6	32.1
Technical Support	18.4	17.0	16.4	15.5
Depot Maintenance: Aircraft Rework	94.0	85.7	59.5	69.9
Other Support: Management Headquarters	6.6	6.7	6.9	7.2
TOTAL: Operation and Maintenance, Navy Reserve	908.0	1,005.7	816.1	797.0

FLEET OPERATIONAL TEMPO

The aircraft flying hour program provides 85 percent Primary Mission Readiness, (including 2 percent in simulators) to train and maintain qualified aircrews in the primary mission of their assigned aircraft. This operational tempo (OPTEMPO) supports 12 Active carrier air wings in fiscal year 1991 and fiscal year 1992, 11 Active carrier wings in fiscal year 1993, and 3 Marine Corps air wings and aviation components of the 1st Marine Expeditionary Brigade (MEB) in all years.

For fiscal year 1992 and fiscal year 1993 ship operations, deployed and non-deployed coverage is budgeted to continue as in fiscal year 1991, with carrier battle groups deploying in world-wide operating areas. OPTEMPO goals of 50.5 underway days per quarter for deployed forces and 29 underway days for non-deployed forces are maintained.

Fiscal year 1992 and fiscal year 1993 estimates for ship and aircraft operations reflect Mid-East operating force levels which existed prior to the commencement of Operations Desert Shield/Desert Storm, and Earnest Will escort operations.

Fleet OPTEMPO is summarized on Table 3.

TABLE 3.—Department of the Navy, Fleet Operational Tempo

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
AIRCRAFT – FLYING HOUR PROGRAM				
Active Forces:				
Primary Mission Readiness (percent) [1]	85	85	85	85
Fleet Readiness Squadrons (percent)	100	100	100	100
Fleet Support (percent)	86	85	85	85
Reserve Forces: Hours per Pilot per Year	121	121	121	121
SHIPS – STEAMING DAYS PER QUARTER				
Active Forces:				
Deployed	54.2	50.5	50.5	50.5
Non-Deployed	28.1	29	29	29
Reserve Forces	21	21	18	18

[1] Includes 2 percent simulator contribution.

SHIP MAINTENANCE AND AIRCRAFT DEPOT REWORK

Ship Depot Level Repair funding increases in fiscal year 1992, despite a decrease in the number of ship overhauls. The increase is largely caused by more expensive overhauls being performed (notably the U.S.S. *Forrestal's* (CV-59) complex overhaul and a refueling overhaul for the U.S.S. *Texas* (CGN-39)), as well as by an increase in industrial fund rates driven by the higher unit costs which result from factors such as the decreased workload. Fiscal year 1993 funding increases to support eight additional overhauls, including an extensive COH for U.S.S. *John F. Kennedy* (CV-

67), and the first refueling of a U.S.S. *Ohio* Class (SSBN-726) and a U.S.S. *Los Angeles* Class (SSN-688) submarine.

The Depot Level Support line increases in fiscal year 1992, as funding transfers in to reflect the conversion of Ship Repair Facilities (SRFs) from reimbursable to Resource Management System (RMS) activities.

Fiscal year 1992 activation funding increases due to a change in the number and mix of ships inactivating. This increase primarily reflects the inactivation of two battleships, two nuclear submarines and the majority of *Knox* Class frigates. Fiscal year 1993 funding declines as the overall number of hulls being inactivated declines. Inactivation of ships includes decommissioning funds for retirement of U.S.S. *Midway* (CV-41), U.S.S. *Missouri* (BB-63) and U.S.S. *Wisconsin* (BB-64) in fiscal year 1992 and U.S.S. *Ranger* (CV-61) in fiscal year 1993.

Total funding levels for Aircraft Rework and Maintenance reflect real program decreases in fiscal year 1992 and in fiscal year 1993, resulting in increased numbers of aircraft and engines overdue for maintenance. This will require additional management attention to ensure that fleet operations are not impacted. Both the Ship and Aircraft Depot programs are priced on the basis of achieving significant economies in the operation of the Navy's Shipyards and Aviation Depots. These savings are to be achieved as a result of increased competition, downsizing, and workload consolidation.

Summary resources and program data associated with maintenance programs are displayed in Table 4.

TABLE 4.—Department of the Navy, Ship Maintenance and Aircraft Rework

[In millions of dollars]

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
ACTIVE FORCES SHIP MAINTENANCE				
Ship Depot Level Repair	2,920.9	2,402.0	2,489.9	2,918.6
Depot Level Support	179.4	181.9	291.1	264.6
IMA	361.5	475.2	461.8	451.8
Inactivations	192.2	358.6	519.1	340.7
TOTAL: Ship Maintenance	3,654.0	3,417.7	3,761.9	3,975.7
Number of Ship Overhauls (units)	19	13	9	17
Ship Overhaul Backlog (units)	2		3	3
Number of SRAs (units)	100	66	81	72
Number of PMAs (units)	55	52	64	52
ACTIVE FORCES AIRCRAFT REWORK				
Airframes	354.1	402.8	338.8	277.8
Engines	217.0	256.7	180.2	192.5
Components	62.3	64.0	59.9	66.6
Support Services	21.8	20.4	17.4	15.5
TOTAL: Aircraft Rework	655.2	743.9	596.3	552.4
Aircraft Overdue for Maintenance	68	123	269	500

CIVILIAN PERSONNEL

The fiscal year 1992 and fiscal year 1993 estimates reflect a reduction of 25,969 and 28,413 end strength, respectively, from the number of civilians on board as of September 30, 1990. The gross reduction reflects the transfer of over 14,000 civilians formerly reflected in the operations account for stock fund operations to the Defense Business Operations Fund to more accurately reflect the cost of stock fund operations. After adjusting for the stock fund transfer, civilian levels reflect a cumulative decline of 10.5 percent by the end of fiscal year 1993. Manpower has been structured at a level that assures responsible execution of the Department's programs given reduced resources while complying with congressional direction to reduce headquarters and acquisition personnel. Within the constrained fiscal environment, the Department will continue to rigorously manage civilian employment as a resource required to execute authorized program.

The fiscal year 1992 and fiscal year 1993 estimates each represent a decline from the previous year's estimate. Included in the overall year-to-year changes are a number of adjustments and realignments based on planned efficiencies and program considerations including the migration of the DON departmental accounting and finance functions to the Defense Finance and Accounting service commencing in fiscal year 1991, as well as commissary and ADP consolidations in fiscal year 1992. Other management improvements resulting from the Defense Management Review recommendations are included such as the consolidation of the Navy's civilian personnel headquarters organizations.

Additionally, incorporated in the budgeted levels are several initiatives that require increases in civilian manpower beginning in fiscal year 1991. These are the substitution of civilians for military personnel and the replacement of Contracted Advisory and Assistance Services with civilian personnel (to reduce the risk of comprising the competitive acquisition process).

It should be recognized that a majority of the civilian employees of the Department of Navy are directly related to our readiness posture. Civilians employed at operation and maintenance activities, such as ship repair facilities and Naval and Marine Corps air stations and bases contribute directly to operational readiness. Other civilians provide essential support in functions such as training, medical care, and the engineering, development and acquisition of weapons systems, all of which have a definite, although longer range, impact on readiness.

A summary display of total Operations and Maintenance, Navy and Operations and Maintenance, Navy Reserve Civilian Personnel is displayed in Table 7.

TABLE 7.—Operations and Maintenance, Civilian Manpower, End-Strength

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
O&M,N	135,836	132,346	109,727	107,392
O&M,NR	2,746	3,021	2,886	2,777
End Strength	138,582	135,367	112,613	110,169

Senator DIXON. I thank you, Admiral Hancock. Ms. Lieby, would you care to state your position?

STATEMENT OF BARBARA A. LEIBY, DEPUTY DIRECTOR FOR OPERATIONS AND SUPPORT, OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY

Mrs. LEIBY. Good afternoon, Mr. Chairman and members of the committee.

Today, I am here to discuss the fiscal year 1992/1993 Operation and Maintenance, Army (OMA) budget request. The 1990s will be a period of enormous change for Army as we respond to global political shifts, public demand to reduce the Federal deficit and long-term decline in budget resources.

Our national military strategy has changed from containment and forward deployment to CONUS-based power projection, forward presence and force reconstitution.

To meet these new realities, the Army is now facing its largest restructuring in terms of dollars, facilities, equipment, personnel and operations. At the same time we must maintain combat readiness to meet ongoing commitments worldwide and to respond rapidly to unforeseen contingencies.

We believe that the fiscal year 1992/1993 OMA budget reflects a balanced allocation of resources to support an appropriate mix of forces and programs to ensure a high quality Army, the best possible leaders, responsive sustainment, equipment, tough realistic training, and flexible doctrine, required to keep the best Army in history.

Meeting these objectives will not be easy. The fiscal realities are not readily apparent by a quick look at the bottom line. Removing the impact of interdepartmental functional realignments, inter appropriation transfers and pricing adjustments, the OMA budget declines 9 percent in real buying power between fiscal year 1991 and 1992 and 12.2 percent between fiscal years 1992 and 1993, with a cumulative loss in buying power from fiscal year 1991 to 1993 of almost 21 percent. It is clear the Army cannot continue business as usual. OMA is a people-related appropriation which finances the infrastructure of the Army. The key cost drivers are the size and composition of the force; the force location; the number, size and location of our bases; quantity and type of civilians we pay; and a number of other variables such as the type, frequency and quality of the training.

Therefore, to meet budget realities, we have looked to innovative ways to improve organizations through streamlining, consolidating and shifting more resource decisions to consumers. Collectively, these initiatives are known as the Defense Management Review Decisions (DMRD).

We reflected base realignment and closure initiative reductions of $921 million in fiscal year 1992 and $1,749 million in fiscal year 1993 in the budget, even though the recommendations for the 1991 base realignment and closure commission were unknown at the time. Over half of the savings were projected for overseas.

We have now begun the process and will continue the process of reconciling the proposed issues with budget assumptions.

We have also reduced our civilian work force consistent with force structure, the DMRD, base realignment and closures, transfers and budget realities. OCONUS civilian reductions financed by OMA are twice the levels projected for CONUS.

In addition, we have acted upon what we believe to be best case assumptions for burdensharing. The budget reflects downward adjustments of $325 million in fiscal year 1992 and $366 million in fiscal year 1993.

In summary, the fiscal year 1992/1993 budget reflects an aggressive schedule to build down the Army. We use the term build down purposely to distinguish between what some have called the freefall or hollowing of the force in the 1970's from our now carefully planned draw down in the 1990's in support of a new national strategy.

We ask your support in approving our OMA resource levels and in providing as much resource flexibility as possible, so that we can maintain the complicated balance within the appropriations.

Gentlemen, this concludes my opening statement, and I will be happy to answer any of your questions.

[The prepared statement of Mrs. Leiby follows:]

STATEMENT BY
MRS. BARBARA A. LEIBY
DEPUTY DIRECTOR FOR OPERATIONS AND SUPPORT
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
(FINANCIAL MANAGEMENT)

INTRODUCTION

Mr. Chairman and Members of the Committee, I am pleased to present the Fiscal Year 1992/1993 Operation and Maintenance, Army (OMA) appropriation budget request and to describe the challenges faced by the Army in retaining hard earned readiness while at the same time building down and shaping the Army of the 90's.

In this year's Army Posture Statement, General Vuono described the difficult task of moving forward on three simultaneous vectors: executing DESERT STORM; maintaining world-wide readiness; and reshaping the Army. While the resource impacts of DESERT STORM are not reflected in the budget submit, those of the other two vectors clearly are. Maintaining world-wide readiness while reshaping our future Army present substantial challenges to those of us responsible for programming and budgeting Operation and Maintenance resources.

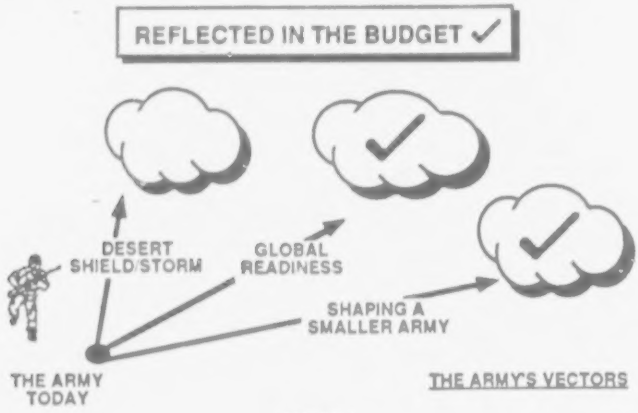


CHART 1

In the budget presented to you today, this reshaping plan begins to unfold. From the military and civilian manpower reductions to the withdrawal of savings associated with anticipated base closures/realignments, the OMA budget reflects the downward trend in real growth associated with meeting deficit targets. But we have attempted to make adjustments prudently, applying reductions to those activities of lower priority in our future plans. While the appropriation reflects an overall program decrease , there have been increases to selected programs of high priority to the Army.

The charts below provide an overview of the appropriation. Chart 2 is a resource stream by subprogram and Chart 3 is a year to year comparison of net transfers, program changes and price adjustments. Program decline is apparent on Chart 3 - - approximately 21% from FY 91 to FY 93.

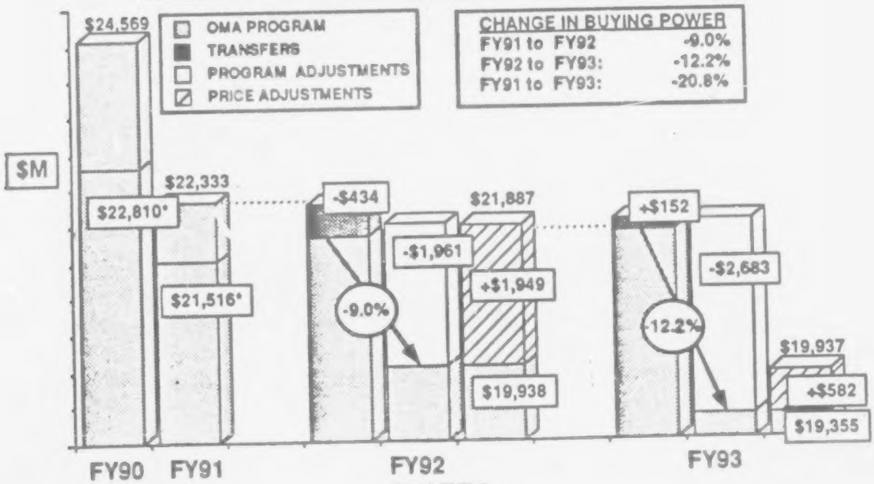
OMA PROGRAM/SUBPROGRAM BREAK

PSP	TITLE $M	FY91	FY92	FY93
P2M	GENERAL PURPOSE FORCES	$7,884	$8,492	$7,380
P31/38	INTELLIGENCE	357	423	447
P3C/39	C3 and INFO SUPPORT	1,172	1,306	1,201
P7S/72	CENTRAL SUPPLY	2,951	2,398	2,188
P7M/73	MAINTENANCE	2,111	1,468	1,104
P7E/78	ENVIRONMENTAL RESTORATION	387	0*	0*
P8T/81	TRAINING	2,409	2,299	2,044
P8M/84	MEDICAL	3,101	3,319	3,471
P8O/87	OTHER GENERAL PERS SUPPORT	816	1,104	1,062
P95/95	ADMINISTRATION	876	801	769
P10/10	SUPPORT TO OTHER NATIONS	259	277	269
P11/11	SPECIAL OPERATING FORCES	0	0	0
TOTAL OMA		$22,333	$21,887	$19,937

* HAVE YET TO RECEIVE OMA PORTION FROM DOD, ESTIMATE $450M AND $500M FOR FY 92 & 93 RESPECTIVELY.

CHART 2

OMA PROGRAM - NEGATIVE GROWTH



* APPROPRIATED

CHART 3

The Army's six imperatives guided us in making difficult resource decisions while attempting to maintain balance across the myriad of programs financed by this appropriation. To successfully sustain readiness and achieve reshaping objectives the imperatives must be properly resourced. These imperatives have served us well in the past and are largely responsible for the phenomenal display of confidence and professionalism of our young men and women in the Persian Gulf today. Balance among programs tied to the Army's six imperatives is the central theme of near and far term work in OMA resource allocation.

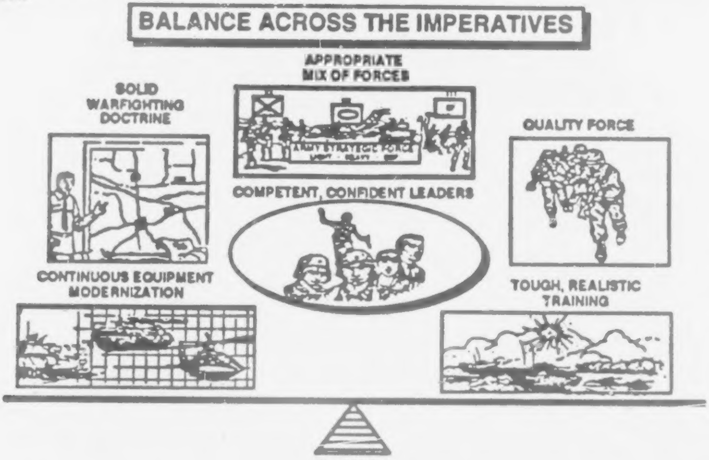

BALANCE ACROSS THE IMPERATIVES
APPROPRIATE MIX OF FORCES
SOLID WARFIGHTING DOCTRINE
QUALITY FORCE
COMPETENT, CONFIDENT LEADERS
CONTINUOUS EQUIPMENT MODERNIZATION
TOUGH, REALISTIC TRAINING
ARMY STRATEGIC FORCE

CHART 4

Maintaining proper balance is complicated by the unprecedented; rapid changes taking place in the world today. Blended with the impact of global changes are the organizational and systemic alterations resulting from Defense Management Review Decisions (DMRDs). The general trend of these management changes has been toward consolidation and streamlining of DoD organizations coupled with a shifting of resource decisions to the consumer - - believed to be a positive thrust for the long term fiscal health of the Department, but requires forbearance in transition. Added to global change and DMRDs are other forces which make resource allocation a complicated business these days and which also make year to year comparisons very difficult.

Nevertheless, a sound OMA resource plan must be built with balance. It is our belief that with the FY 92/93 OMA budget we have achieved this balance among the Army's imperatives by adequately resourcing an appropriate mix of forces and supporting programs which ensure: a high quality Army, the best possible leaders, responsive sustainment to equipment, and the tough, realistic training and flexible doctrine demanded by the best Army in history.

MIX OF FORCES

An FY 93 snapshot of the Army's global orientation with four corps and twenty two divisions is portrayed on Chart 5.

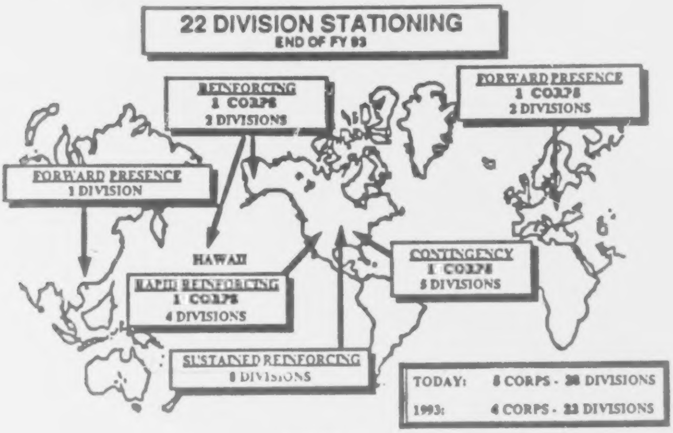
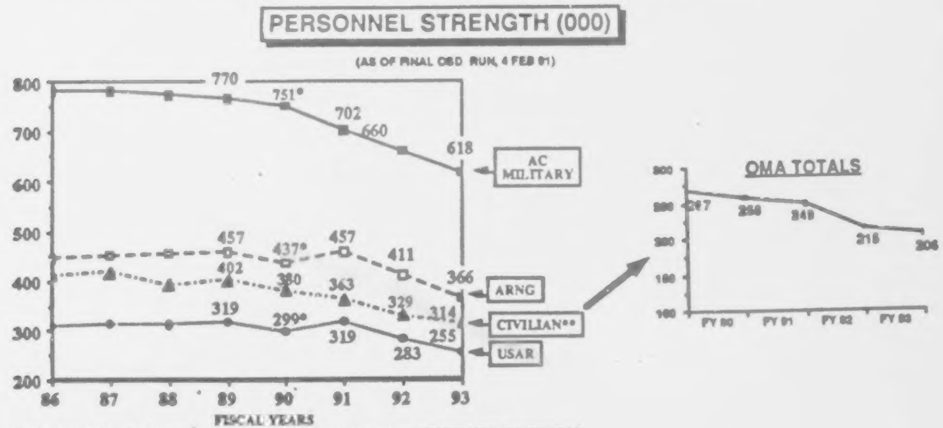


CHART 5

The associated manpower levels through FY 93 are shown below on Chart 6. This represents an acceleration of the Army's plan presented to you a year ago and is driven by the necessity to meet the targets of last year's budget agreement. Note that OMA finances only a portion of Army civilians.



* Includes 18,200 RC soldiers added to the AC total due to Operation DESERT SHIELD/STORM

** Includes all Army civilians funded from all appropriations

CHART 6

The force mix summarized on Charts 5 and 6 reflect an active Army of 14 Divisions by FY 93. The end strength will continue to decline beyond FY 93 reaching a planned FY 95 end state of 535K active component and 551K reserves. The details of this future Army are still being developed, however, it is clear from Chart 5 that with a smaller force deployed OCONUS, future military strategy will depend heavily on rapid force projection as opposed to the past where we relied on forward deployed forces backed up by rapid reinforcement. Clearly, the lessons learned in Southwest Asia are proving especially valuable to us in the "shaping" work now underway. The stationing plan for this mainly CONUS-based smaller Army is a major portion of our work and is linked to Base Realignment and Closure (BRAC) decisions yet to be made. This means there is a degree of uncertainty with respect to the future infrastructure the OMA appropriation will have to support.

Despite the "infrastructure uncertainty," we have aligned OMA resources based on manpower drawdown plans (both military and civilian) and by making BRAC assumptions particularly as they relate to the CONUS/OCONUS Army. The chart below summarizes the major drivers of OMA, most of which are directly related to the Army's "Mix of Forces."

MAJOR "DRIVERS" OF OMA RESOURCES

OMA IS DRIVEN BY:

- SIZE AND COMPOSITION OF THE FORCE
- FORCE LOCATION
- QUANTITY AND TYPE OF SUPPORTING CIVILIANS
- NUMBER, SIZE AND LOCATION OF BASES

... and many other variables

CHART 7

A considerable portion of OMA finances civilian pay and other "people heavy" contracts. OMA dollar adjustments, therefore, affect large numbers of people. Chart 8 portrays OMA by function for FY 92. This is a very important chart, since it clearly highlights the "people heavy" nature of the appropriation - - the largest pieces of the "OMA Pie" being personnel compensation and contracts.

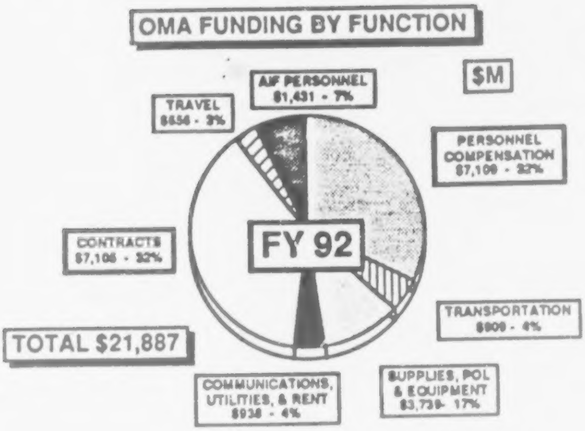


CHART 8

As stated earlier, a key driver of OMA related to the force mix is the number, size and location of bases - - a driver which is linked to BRAC decisions. At present, some BRAC plans are approved and in the process of implementation, with many still in the "proposal" stage. A summary of CONUS/OCONUS BRAC adjustments to OMA is displayed on Chart 9.

BRAC ADJUSTMENTS TO OMA

$M	FY 92	FY 93
CONUS	-$194	-$396
OCONUS	-$545	-$814
HQ/TDA*	-$182	-$539
TOTAL	-$921	-$1,749

* MIX OF CONUS/OCONUS

CHART 9

Successful implementation of BRAC initiatives is especially important to this appropriation since, by and large, OMA finances the infrastructure of the Army. Thus, to meet deficit targets, infrastructure must be scaled back, but remain directly linked to the military personnel drawdown. To the degree this drawdown is affected by DESERT STORM, budgeted reductions will not be executable.

As infrastructure is scaled back, that which remains needs to be supported at an adequate level. Of particular importance are the resources which support Base Operations (BASOPS), Real Property Maintenance (RPM), and Environmental Compliance. Funding for these programs is shown in Chart 10.

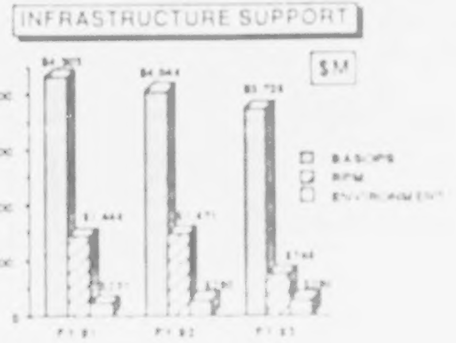


CHART 10

Several major changes that tend to distort BASOPS/RPM resource levels deserve mention. In FY 92 there is an increase of $416 million associated with the change in foreign currency exchange rate (2.03 DM/$1 to 1.5 DM/$1). This change has no impact on buying power, rather it merely reflects the impact of the overseas value of the dollar. In FY 93, $566 million of RPM was transferred to the Military Construction Appropriation. These funds are for major repair projects costing above $15,000 per project, as well as minor construction projects where the total construction cost does not exceed $200,000. Since all facility investment decisions will be managed on an integrated basis, this change should assist in maximizing limited resources and provide for improved management, planning, and budgeting. Also, family support programs for child and youth development and for the Army Community Service were transferred from BASOPS to Program 8 (Other Personnel Support) effective in FY 92.

The Army remains committed to becoming a leader in exercising stewardship in preserving and protecting the environment. This budget funds the abatement of all Category I and some Category II projects.

It is imperative to maintain a controlled and rational builddown process that minimizes turbulence and retains the proper mix of forces. Determining the functional mix (active and reserve, heavy and light, tooth to tail, etc.) in a smaller Army is certainly demanding, and arriving at the "right" CONUS/ OCONUS mix of forces has presented very unique challenges. In the budget this year we have attempted to comply with the clear Congressional mandate to reduce overseas forces and supporting resource levels. For example, Chart 11 displays OMA financed civilian reductions as they relate to CONUS and OCONUS. Foreign national reductions are also shown. Achieving foreign national reductions is particularly tough because of host nation agreements made in years past. The Army has applied more of the civilian reductions to OCONUS commands and, in turn, to Foreign National Employees.

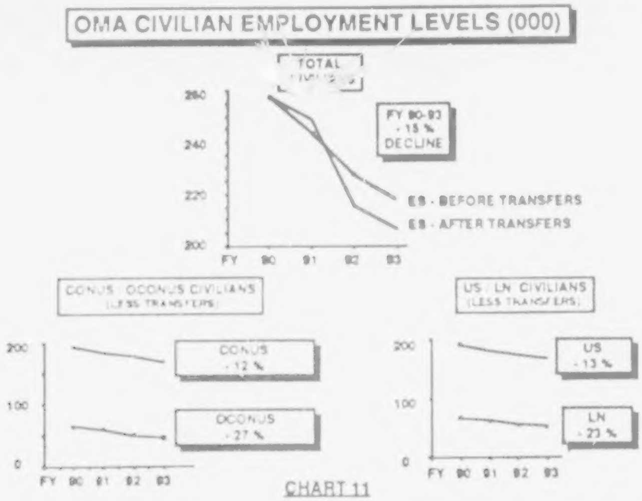


CHART 11

We are aware that the impact of DESERT STORM on FY 92 will affect this civilian reduction plan - - especially OCONUS. There are at least ten OCONUS installations which were due to begin closing in FY 91 which have had to remain open to support families left behind. Achieving the reductions shown above in FY 91 and 92 will be extremely difficult. Even though it is clear that the OCONUS workforce must be reduced (or paid for by someone else), a viable OCONUS infrastructure must be retained to support deployed soldiers and their families. In that regard, we believe OMA OCONUS resources have been reduced as low as feasible, to include adjustments in anticipation of favorable burdensharing agreements with foreign countries. While there is some burdensharing progress being made, final agreements must materialize or the end result will be an under-resourced OCONUS force. Downward dollar adjustments in anticipation of increased burdensharing amount to $325 million in FY 92 and $366 million in FY 93.

QUALITY

To have a viable force we first must recruit it. Individuals committing to the Army must know there are solid opportunities awaiting them: challenging work, educational benefits, quality health care, adequate facilities for work, recreation and living. In recent years the Army has enjoyed great success in attracting quality soldiers. Some of the programs linked to Quality are shown on Chart 12. The Army's performance in the Persian Gulf is clear evidence that a quality force makes an enormous difference. The recruiting environment may change as a result of DESERT STORM, but, the lessons learned in the Gulf should not be cast aside. It remains critical that recruiting resources remain at proper levels. This is why we have made every effort to keep the recruiting program strong. The recruiting program submitted in the budget reflects the extension of the FY 91 Congressional reductions and although the resource stream appears flat, adjustments have been made to support a future steady state of 535K.

SOME OMA PROGRAMS LINKED TO QUALITY

$M	FY91	FY 92	FY 93
RECRUITING	$142	$146	$152
FAMILY PROGRAMS	$156	$155	$143
• CHILD/YOUTH DEVELOPMENT	$101	$105	$96
• ARMY COMMUNITY SERVICE	$55	$50	$47
ARMY CAREER ALUM PROGRAM	$20	$26	$26
PRIMUS CLINICS	$31	$39	$45
CHAMPUS	$1,109	$1,145	$1,291

CHART 12

Attracting a quality force demands more than just recruiting bonuses - - family programs are particularly important. The Nation has been witness to the effects on families of deployed soldiers and many appreciate how critical family well being can be to an Army which is 56% married. The infrastructure they rely on is too important to neglect - - health care is a prime example and is one of the few areas where you will see increases in the OMA budget this year. CHAMPUS has been fully funded and increases have been allocated to the direct care health system for the addition of six PRIMUS clinics by FY 93. Additionally, the medical functional area has been protected as much as possible in determining manpower adjustments. Also, this budget funds the Army Career Alumni Program (ACAP). This program is designed to assist soldiers, family members, and civilian employees as they leave a career in the Army and move into the civilian sector - - clearly a "concern for people" program. Meeting all of the needs of our people will also impact on attracting quality personnel in the future.

DEVELOPING FUTURE LEADERS

Leader development is an essential element of Army readiness. The DESERT STORM experience is clear - - tremendous leadership at all levels is the difference between the American Army and most other armies in existence today. Leader development, therefore, is another area in our budget where we have protected resource levels.

SOME OMA PROGRAMS LINKED TO LEADERSHIP

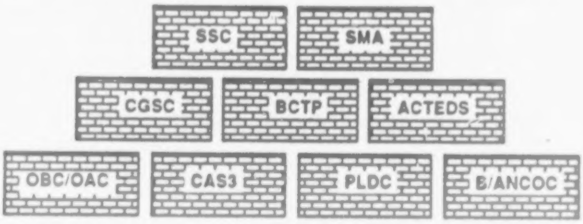


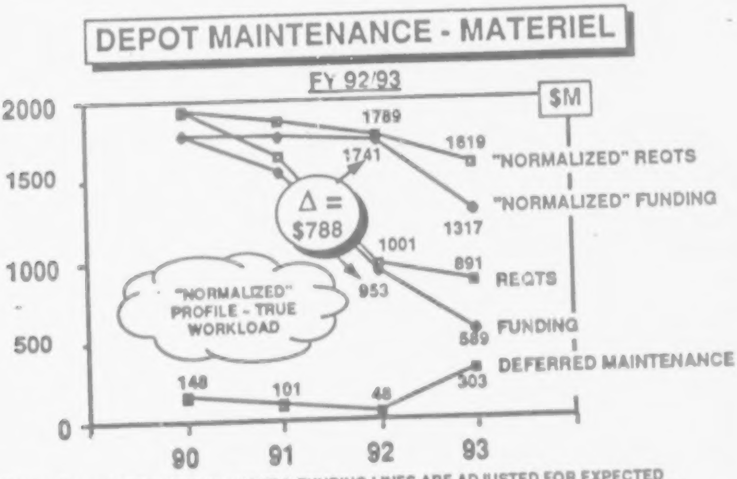
CHART 13

Combat in a high tech world is fast moving and highly demanding on young leaders. While practice in the field and experience during conflicts are great developers, we must augment the development process with formal education. Our Non-Commissioned Officer corps receive their formal education through a series of courses starting with the Primary Leadership Development Course (PLDC) conducted at installation level throughout the Army, the Basic and Advanced Non-Commissioned Officer Courses (BNCOC/ANCOC) held at the selected posts, and the Sergeants Major Academy (SMA) at Fort Bliss, Texas. Officers receive their formal education through the Basic and Advanced Courses (OBC/OAC) associated with their basic branch, the Combined Arms and Services Staff School (CAS3) and the Army Command and General Staff College (CGSC) at Fort Leavenworth, Kansas and the Senior Service Colleges (SSC) in Washington, D.C. and Carlisle, Pennsylvania. Adequate resourcing of the Army's school system and supporting infrastructure is essential if we are to continue developing the Army's future leaders. There will be arguments heard following DESERT STORM that further schooling is unnecessary for this force since their leadership was forged under the stress of combat. We must not mortgage our future by curtailing leadership and other training related resources in such a dangerous and turbulent world. DESERT STORM was markedly different than JUST CAUSE; and the next war may well be unlike either of these. Our future leaders need continuous development in order to adapt to any future challenge.

Training the civilian workforce is key to the effective management of resources which support the myriad of Army missions and functions. The Budget supports the requirements of the Army Civilian Training and Education Development System (ACTEDS).

EQUIPMENT SUSTAINMENT

Although OMA does not buy major items of equipment, the appropriation supports equipment once purchased and fielded. Many of the Defense Management Review Decisions (DMRD) reflected in this budget are in the maintenance and supply functional area. For example the funding for Depot Level Reparables (DLR) by the customer begins 1 April 1992. The depot maintenance chart below compares what the financing would have been (normalized) had this initiative not occurred with the funded level you will



NOTE: NORMALIZED REQUIREMENT & FUNDING LINES ARE ADJUSTED FOR EXPECTED STOCK FUND ORDERS FOR DLRs (FROM STOCK FUND, P7M OR OTHER OMA CUSTOMERS)

CHART 14

actually see in the depot maintenance program. The intent of the chart is to demonstrate that depot maintenance funded workload will approximate the "normalized" funding line, but that only a portion of the depot maintenance dollars will be found in that particular program. For example, in FY 92, $752 million of the $788 million difference between the funding and "normalized" funding lines is due to the DLR transfer and thus, those dollars which previously appeared in P7M are now in "customer accounts" (primarily P2 Mission and P8 Training).

You will see selected increases in the Central Supply Program this year, most notably in second destination transportation (SDT). This is to ensure adequate resources are available to redistribute equipment as the force is drawn down and reshaped. It is clear to us that DESERT STORM will impact directly on equipment redistribution plans. This impact has yet to be fully assessed.

A major FY 92/93 budget initiative related to providing responsive support to fielded equipment is the Defense Business Operations Fund (DBOF). In FY 92, this Defense fund will absorb the Army Industrial Fund (AIF), the Army Stock Fund (ASF) and similar funds of other Services. For example, in FY 93 OMA has been reduced by $133 million in anticipation of increased productivity. The intent, as with many DMRDs is to organize support functions on a more business-like footing and shift the decision making burden to the customer. The DBOF will reinstate capital budgeting to support the various business activities of the fund. The DBOF initiative was designed to provide more flexibility and increased economies. To implement capital budgeting, $321 million in FY 92 ($35 million for FY 93) has been transferred from Procurement and Military Construction to DBOF "customer" accounts.

DEFENSE BUSINESS OPERATING FUND (DBOF)

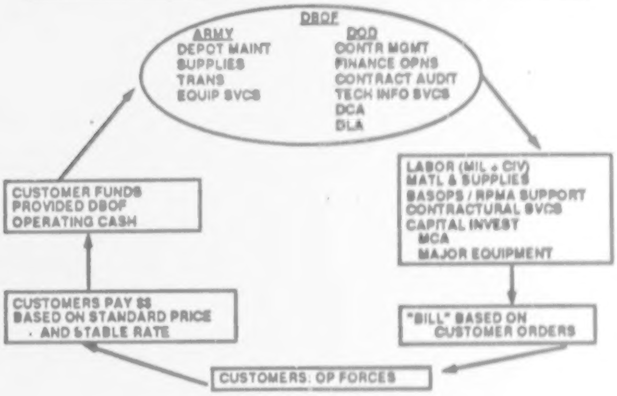


CHART 15

TOUGH, REALISTIC TRAINING AND A WINNING DOCTRINE

OMA funding reflected in the budget provides for 800 miles of ground OPTEMPO and 14.5 hours per month per crew for air OPTEMPO. This is believed to be the minimum required by units to retain high readiness ratings in training. As a result of force builddown assumptions, some training loads will decline in FY 92/93, and the budget reflects a corresponding decrease. However, training at the Combat Training Centers (CTC) will increase. Chart 16 shows CTC funding for FY 92/93. The Army receives a high return for frequent CTC usage and has deliberately resourced CTC programs at higher rates than last year. Army forces who fought in DESERT STORM clearly benefited from the valuable experience gained from CTC rotations. The remarkable success in executing AirLand Battle doctrine in Southwest Asia can be partially linked to the experience gained in CTC exercises.

OMA CTC FUNDING

$M	FY91	FY92	FY93
NATIONAL TRAINING CENTER	$118	$140	$146
JOINT READINESS TRAINING CENTER	$50	$88	$97
COMBAT MANEUVER TRAINING CENTER	$35	$40	$36
BATTLE COMMAND TRAINING PROGRAM	$31	$51	$48
TOTAL	$234	$319	$327

CHART 16

We continue to explore alternative, less costly means of training soldiers via simulators, computer driven exercises and other cost saving initiatives. The Battle Command Training Program (BCTP) improves combat readiness by training Corps and Division staffs using computer assisted battlefield simulation, terrain board models and tactical communications to replicate those forces supported by the staff being trained. During both FY 92/93, two Corps and eleven Divisions will undergo BCTP. The Distributed Training Initiative is another cost effective method for training soldiers using automation and other less costly techniques. This initiative was begun in FY 91 when Congress allocated $10 million to the National Guard O&M account. The program is continued in the OMA appropriation for FY 92 and 93 in the amount of $10 million and $7.5 million respectively.

Joint Chiefs of Staff (JCS) exercises are also essential to the Army's overall training program. Deployment in an uncertain world is a significant challenge which the Army faces. Meeting the rapid deployment challenge

successfully, for both light and heavy forces, is enormously difficult and requires constant practice. The lessons of DESERT SHIELD/STORM will be most useful in solving deployment related problems in the years ahead. However, a global mix of JCS exercises will be needed to provide the Army an opportunity for a wide variety of realistic deployment training. The JCS Exercise Program was significantly reduced in FY 91 because of Operation DESERT SHIELD/STORM. During FY 92/93 the Army will participate in approximately fifty exercises each year. This training will be even more critical as the OCONUS Army becomes smaller and rapid force projection requirements increase in importance.

JCS EXERCISES

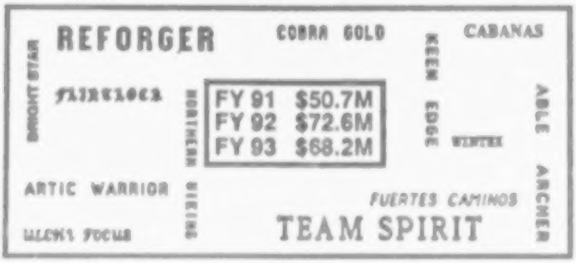


CHART 17

Although the force will be smaller in coming years, the missions remain extensive and thus, training demands will be far greater as units in a smaller Army take on multiple missions. Training flexibility is key in such an environment. This was precisely the experience in DESERT STORM, where Army forces stationed in, or earmarked for, Europe found themselves fighting a major land war in the deserts of Southwest Asia.

The United States Army has long held a position at the forefront of doctrinal development and change. Emerging technologies, combat experiences, lessons learned from training exercises and a myriad of other events require that we constantly evaluate and update our doctrine. Given the super power status of the United States, doctrine cannot limit itself to a single level of war, but rather must address the entire spectrum of conflicts. The Active Defense of the 1970s was replaced in the 1980's by AirLand Battle (ALB), a doctrine which is serving us well. However the world continues to change and work is now underway on AirLand Battle-Future (ALB-F). We appreciate the advantages sound, well understood doctrinal concepts can offer an army in the field - - DESERT STORM is a vivid example where AirLand Battle doctrine was magnificently applied as fluid, multifaceted combat operations unfolded before an amazed world. Combat Development resources, which are very important to the support of doctrinal work, show a decline from FY 91 through 93. This causes some concern since it is important to adequately finance such programs in order to perform the studies and develop the tactics, techniques, and procedures which will assure sound and workable doctrinal concepts for the Army of the 21st century. Nevertheless, it is an area where the Army had to absorb resource reductions.

SUMMARY

Operation and Maintenance resources represent the life blood of the Army. Our budget request for FY 92/93 is an integrated plan designed to meet requirements and keep the Army vibrant and at an acceptable state of readiness. Because of the integration required to maintain proper balance and maximize the return on OMA dollars, we can not view OMA financed programs in isolation. Indeed, there are many interrelationships: the depot maintenance and central supply dollars which indirectly support training at the NTC or adequately resourced child care programs which contribute to higher soldier morale (and, in turn, readiness) are but two examples of these linkages. Moreover, OMA is a complex appropriation with many inter-relationships. Comparisons between years, as well as between programs must be accomplished with a high degree of thoroughness because of transfers between appropriations and programs or as a result of other initiatives which are not always visible in macro resource displays. Additionally, inter-relationships among all the Army appropriations may distort comparisons within OMA as changes within one appropriation cause corresponding changes in another. For example, if the Military Personnel Appropriation experiences a slippage in the military personnel drawdown, the impact to OMA is significant.

OMA LINKAGES SUPPORT
BALANCE ACROSS THE IMPERATIVES

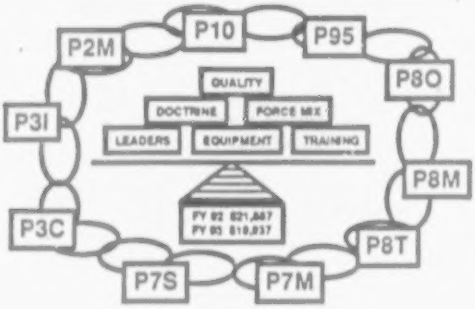


CHART 18

The Army asks for your support this year in approving our OMA resource plan for maintaining readiness and beginning the hard work of shaping a future Army that is versatile, deployable and lethal. Above all, we ask for your support in providing as much flexibility as possible in resource allocation, so that the complicated balance reflected in the OMA appropriation can be maintained.

Senator DIXON. Thank you, Mrs. Leiby. General Finan.

STATEMENT OF BRIG. GEN. JOHN L. FINAN, USAF, DIRECTOR OF BUDGET OPERATIONS, DEPUTY ASSISTANT SECRETARY (BUDGET) U.S. AIR FORCE

General FINAN. Mr. Chairman and members, it is a pleasure to appear before this committee to present the Air Force's 1992/1993 Operation and Maintenance budget.

While the Air Force certainly supports the DBOF concepts, so aptly explained by Mr. Shycoff, we are concerned the focus on DBOF is overshadowing our primary readiness account, Air Force O&M. So I would like to take a few moments to address the O&M.

After adjusting for inflation in program transfers into and out of the O&M account, the budget authority for Air Force O&M for fiscal year 1992 is down over $2 billion from the 1991 appropriated amount.

This projects a real decline of over 10 percent in O&M in fiscal year 1992, and is on top of a 9 percent real decline experienced in fiscal year 1991.

After considering the effects of inflation, Air Force O&M is at the lowest level in real terms since 1980, having declined 20 percent from 1990 to 1992 alone.

I would like to point out that the fiscal year 1992 budget is one that reflects a great deal of constraint and turbulence. The Air Force O&M budget reflects a constrained top line associated with the continuing pressure to reduce the deficit, while recognizing the dramatic changes in the global security environment.

The budget's turbulence is manifested by significant changes in force structure and transfers between accounts. These factors combine to produce deep reductions in the O&M account.

Force structure changes produce a reduction of over 216,000 flying hours between 1991 and 1992, while our optempo remains relatively constant.

Between fiscal year 1991 and 1992, civilian end-strength declined by over 30,000 positions: about 25,000 of these positions are associated with transfer actions; 16,000 positions are being transferred to the stock fund; another 9,000 are tied to transfer of the commissary and the Air Force accounting and finance center to DOD operations; and the return of Brooke Medical Center to the Army.

The net of these transfer actions, Air Force estimates a total decline of 6,000 civilian positions in 1992, due mainly to a projected extension of the hiring freeze and force structure reductions.

Our 1992 budget includes almost $1.5 billion of transfers into the O&M appropriation for reimbursing the Airlift Service Industrial Fund for military manpower and transfer of funding for depot-level reparables from the procurement appropriations.

When these program transfers are added to about $1 billion in price growth or inflation, there may be a false perception that the O&M appropriation enjoys level program funding, when in fact it does not.

I would like also to stress that a high proportion of O&M costs are fixed costs of operating the infrastructure and they change very little in the short run. Hence, as we continue to pursue the build down approach to both our force structure and our funding profile, I think the focus on Air Force O&M should emphasize two cautionary considerations.

First, O&M savings from base closures, DMRD's and force structure reductions rarely generate as fast as projected; and second, as we build down, we need to avoid building more financial fences that simply hinder our commanders' much needed flexibility in this scarce resource environment.

Mr. Chairman, I think we have laid out an O&M program which, with your support, can ensure that as we look to a smaller Air Force, it will be an Air Force that is just as capable of getting the job done as today's Air Force did in Desert Storm.

Mr. Chairman, I understand the fiscal environment that we face and I want to assure you the Air Force will cooperate fully with you and your committee. I solicit your support of this very important readiness account, and I am ready for any questions.

[The prepared statement of General Finan follows:]

PREPARED STATEMENT BY BRIG. GEN. JOHN L. FINAN, DIRECTOR OF BUDGET OPERATIONS, DEPUTY ASSISTANT SECRETARY (BUDGET), U.S. AIR FORCE

OPERATION AND MAINTENANCE, AIR FORCE

Mr. Chairman and members of the committee: I am pleased to appear before this committee to present and discuss the Operation and Maintenance (O&M), Air Force budget request for fiscal year 1992. My statement will discuss the O&M funding history from fiscal year 1991 through fiscal year 1993 and will highlight the forces, manpower, and programs supported by these O&M funds.

The following is a summary of the Air Force fiscal years 1991-1993 O&M account:

[In millions of dollars]

	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
O&M, Air Force (Active)	$20,857	$20,352	$20,760
O&M, Air Force Reserve	1,086	1,075	1,233
O&M, Air National Guard	2,272	2,288	2,701
Total Air Force	$24,215	$23,715	$24,694

For the remainder of my statement, I will focus my comments on the O&M, Air Force (Active) request, since the Air Force Reserve and Air National Guard budgets are reviewed separately by this committee.

DESCRIPTION OF OPERATION AND MAINTENANCE, AIR FORCE

The Air Force Operation and Maintenance (O&M) appropriation is the underpinning of readiness and sustainability. The O&M appropriation supports the key ingredients of combat readiness by providing the funds needed to operate and maintain aircraft and related weapon systems; recruit and train personnel; operate command, control, communications and computer systems; and purchase supplies, equipment, and fuel. O&M also supports essential combat related activities such as intelligence, logistics, weather, air traffic control, search and rescue, medical operations, maintenance of runways and base facilities, contract services, and the maintenance of the working and living environment of Air Force personnel.

Approximately 85 percent of the O&M budget is for fixed, must-pay bills such as flying hours and training, weapon system support and maintenance, deployments, space launches, scheduled equipment and facility maintenance, civilian pay, utility expenses, and contract operations. Financial requirements in the O&M appropriation are dictated by programmed force structure levels and activity rates. Examples are the number and type of aircraft and squadrons, the number of aircraft sorties and flying hours, equipment inventories, civilian end strength, training and deployments, the number of installations, and the quantity and complexity of vehicles and other equipment in operation. These force structure levels and activity rates are predicated on the current threat to the United States.

THE CURRENT THREAT AND READINESS

The U.S. Air Force of today is the best in the world. Our unparalleled ability to rapidly project precise, lethal force anywhere in the world provides our Nation's leaders with the flexible capabilities needed to underwrite national security objectives. The changing international political climate and accelerating shift from a bipolar toward a multipolar world bring new challenges and opportunities. We must continue to broaden our focus and enhance our ability to respond flexibly throughout the globe. While the potential of a military conflict with the Soviet Union has decreased significantly, the Soviets still maintain, and as Deputy Secretary of Defense Atwood recently testified, continue to modernize "the most awesome first-strike nuclear capability the world has seen, capable of destroying us in a matter of hours." At the same time, the regional security environment has become less predictable. Hostile regional powers, equipped with deadly modern armaments, threaten our national interests.

As outlined in the Air Force's strategic planning framework, Global Reach—Global Power (Appendix A), the unique characteristics of the Air Force—speed, range, flexibility, precision, and lethality—contribute significantly to underwriting U.S. national security objectives. Our challenge is to organize, train, equip, provide, and support the balanced aerospace forces needed to deter aggression across the spectrum of conflict and, should deterrence fail, provide our leaders a broad range of options to achieve-national objectives.

Further, the evolving world order dictates a fundamental restructure of the Air Force, which affects both the overall size and internal organization of the Air Force. The reduced Soviet conventional threat enables us to respond to economic pressures by reducing force structure without significantly increasing near-term risk. While a smaller force inherently entails some increased level of risk, we are applying advanced technologies to enhance overall lethality and power projection capabilities.

One past stealth investment which is now moving into the O&M world, is beginning to pay dividends. Just as the rifle barrel significantly increased the effectiveness of the foot soldier, stealth is perhaps the most revolutionary set of military technologies since the advent of radar and the atomic bomb. It will revolutionize U.S. air combat capabilities. Future stealth aircraft, including the B-2 and the ATF, will require significantly fewer—in some cases dramatically fewer—sorties and support aircraft to accomplish mission objectives. Traditionally, this Nation has capitalized on advanced technologies to provide the military capabilities needed to support national security objectives while minimizing risk to American lives. By significantly increasing the combat effectiveness of each airframe, stealth enables us to retain required combat capabilities even as force structure shrinks. At the same time, it dramatically reduces the potential cost, in human terms, should force be required to achieve national objectives. Desert Storm provides strong evidence of the success of this philosophy.

The military might of a nation has historically been measured in terms of troop strength and quantities of hardware: divisions, tanks, aircraft, missiles, and ships. However, an assessment of military capability based exclusively on quantities of equipment and number of personnel ignores the readiness element of combat capability. Readiness is the ability of forces, units, weapon systems, or equipment to deliver the outputs for which they were designed (includes the ability to deploy and employ without unacceptable delays). It is made up of the forces in being (force structure), the age and technological capability of weapon systems and equipment (modernization), and the ability to continue effective military operations over an extended period of time (sustainability). Readiness is an essential element of combat capability. The O&M funding requirements reflected in this budget support a smaller but smarter force to meet national security objectives. In the O&M world, we are particularly pleased with our recent success in airlifting large numbers of troops to the Middle East and then sustaining this expanded Active, Reserve and Guard total force structure. These critical O&M functions will be discussed in more detail in the following paragraphs.

THE O&M BUDGET IN TRANSITION—FISCAL YEAR 1990 TO FISCAL YEAR 1992

Before I cover the fiscal year 1992 specific changes reflected in each Major Force Program, I would like to give you an overview of the significant changes occurring between fiscal year 1990 and fiscal year 1991 and between fiscal year 1991 and fiscal year 1992. In fiscal year 1991, the Air Force's O&M budget reflected a constrained topline associated with continuing pressure to reduce the deficit, and the prevailing worldwide political environment. At the current level of funding in fiscal year 1991, real growth declines 9.9 percent from fiscal year 1990 reflecting some reductions in force structure, the first impacts of the efficiencies to be realized from the Defense Management Review (DMR) process, and congressional appropriation action. Two examples of fiscal year 1991 DMR efficiencies are the transfer of all inventory control operations to the Stock Fund and streamlining contract management operations. Also, starting in fiscal year 1991, all funding for the Counternarcotics Program and Special Operations Forces was centralized within DOD accounts.

FISCAL YEARS 1992-1993 OVERVIEW

The fiscal years 1992-1993 President's budget continues to provide for deep reductions in the O&M account. Price growth (inflation) and program transfers into the account combine to provide a false perception of level program funding from fiscal year 1991 through fiscal year 1993. Inflation for the period is $1.1 billion for fiscal year 1992 and $1.1 billion for fiscal year 1993. Transfers in include funding from the Military Personnel Appropriation to provide for reimbursing the Airlift Services Industrial Fund for military manpower used in performing its mission ($986 million in fiscal year 1992 and $996 million in fiscal year 1993), and funding for Depot Level Reparables transferred from the procurement appropriations to the customer accounts ($559 million in fiscal year 1992 and $1,376 million in fiscal year 1993). When price growth (inflation) and transfers are discounted, the Air Force O&M budget reflects a programmatic real decline in fiscal year 1992 of 10.2 percent and a further decline in fiscal year 1993 of 0.2 percent.

The fiscal year 1992 reduction affects programs across the spectrum of the O&M account. Reductions in the number of primary aircraft account for reducing the Air Force flying hour program by 10 percent or 215,000 flying hours which impacts the funding in almost all major force programs. Such force structure/flying hour reductions will also reduce Depot Maintenance requirements. While not funded at 100 percent of the current requirement, Depot Maintenance will be adequate to maintain readiness of our weapon systems and support equipment. Civilian end strengths will decline by 30,693 from fiscal year 1991 to fiscal year 1992 as a result of functional transfers to Defense Agencies and other services (25,100), and continuation of the hiring freeze into fiscal year 1992 (5,900). Real Property Maintenance funding declines 37 percent in fiscal year 1992, and the resulting backlog of maintenance and repair will impact our ability to maintain the 30 year old Air Force infrastructure. The Real Property Maintenance funding profile includes an extension of the congressionally directed cut of $112.5 million for overseas bases and facilities.

Our Major Force Program on Intelligence, Communications and Space will undergo significant changes. Communications funding requirements will decline due to the greater use of circuit bundling techniques. Automated Data Processing (ADP) requirements will grow slightly in fiscal years 1992-1993 due to the initial investment required to regionalize ADP operations (a DMR initiative). After the initial investment, this regionalization will generate long term savings for the Air Force. The Space Support Program declines primarily as a result of transferring funding for Titan IV launch support services to the Missile Procurement Appropriation.

The Air Force has also taken steps to achieve the congressional initiative of greater burdensharing of overseas costs by the allies of the United States by funding only 70 percent of requirements for overseas foreign national employees.

Beginning in fiscal year 1992, DOD introduced a major innovative approach toward financial management, the Defense Business Operations Fund (DBOF). The primary goal of DBOF is to "influence managers and employees to provide the best support at the lowest cost". It will accomplish this through the use of a revolving fund. This financial mechanism will insure the customer of a support service which will (1) define the requirement and (2) pay for the support at the price which reflects his specific requirements. This change is reflected throughout our budget. All existing Industrial and Stock Funds were moved into the DOD DBOF Revolving Fund. In these cases, the funding was already in the customers baseline. One new function, Accounting and Finance, was added in fiscal year 1992. Funding was realigned into Major Force Program 9 to pay for these services. In fiscal year 1992, the customers of the DBOF will also pay for capital investment costs incurred by the DBOF. Funds were realigned from various investment accounts into O&M. It is anticipated that this new structure will provide an incentive for both the provider of the support as well as the customer to make more economical decisions. Additional support functions will be added to the DBOF over time. In fiscal year 1993, $200 million in productivity savings has been incorporated into our baseline.

THE O&M APPROPRIATION BY MAJOR FORCE PROGRAM AND FUNCTION

We look at O&M according to how our accounts are structured; that is, by Major Force Program or mission area. Our budget justification book is prepared in this manner. Today, I would like to briefly highlight major funding changes in these Major Force Programs between fiscal year 1991 and fiscal year 1992.

OPERATION AND MAINTENANCE—TOA in Constant Fiscal Year 1991 Dollars, and Adjusted for Transfers

[Dollars in millions]

Major Force Program	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Strategic Forces	$2,871	$2,622	$2,646
General Purpose Forces	4,343	3,748	3,616
Intel/Communications/Space	2,820	2,834	2,813
Airlift and Sealift	1,197	1,119	1,045
Central Supply and Maintenance	4,857	3,776	3,740
Training	1,435	1,464	1,507
Medical	2,317	2,219	2,360
Administration	533	521	533
Support to Other Nations	10	8	8
Budget Less Inflation and Transfers	20,383	18,311	18,268
Addback:			
Inflation		1,087	1,065
Transfers	474	954	1,427
Fiscal years 1992–1993 President's budget	20,857	20,352	20,760

STRATEGIC FORCES

In fiscal year 1992 Strategic Forces reflect an overall decreased program after excluding the transfer of increased funds for depot level reparable items which are a composite of replenishment spares and centrally funded exchangeables. Replenishment spares were previously funded in the Aircraft, Missile, and Other Procurement appropriations, while exchangeables were centrally funded in the Major Force Program 7 Depot Maintenance account. Increases occur in Minuteman squadrons due to expenses for silo dismantlement and site destruction required for Minuteman II deactivation. The B-2 program necessitated increased costs for beddown preparations. Also, the Environmental Compliance program was increased to provide for both current deficiencies and to prevent future problems. More than offsetting decreases occur from eliminating FB-111 aircraft ($20.5 million), retiring the older B-52G force ($26.9 million) and reducing active force KC-135 force structure ($11.9 million) due to transfers to the Air Reserve Component (ARC). Further decreases occur by mothballing the east and west coast sectors of the Over-the-Horizon Backscatter (OTH-B) radar system and terminating the Alaskan sector ($14.0 million). Likewise, Strategic Force programs decrease overall in fiscal year 1993 as the force structure drawdown continues with further KC-135 transfers to the ARC ($23.0 million) and retirement of the remaining B-52G aircraft dedicated to Air Launched Cruise Missiles ($54.4 million). Also, mothballing of the OTH-B radar system will continue into fiscal year 1993. Again, there are program increases due to continuing the Minuteman II deactivation, the B-2 activation which accelerates in fiscal year 1993, while continuing to meet environmental compliance requirements.

GENERAL PURPOSE FORCES

Funding for General Purpose Forces declines between fiscal year 1991 and fiscal year 1992 by $97 million. Program decreases primarily reflect the continued drawdown of Tactical flying hours ($96.1 million) and decreased Base Operating Support (BOS) and Real Property Maintenance (RPMA) of $392.0 million. These decreases are offset somewhat by increased F-15E force structure (36 PAA, $33.2 million), half-year Depot Level Reparable (DLR) funding ($237.9 million) (transferred from the procurement appropriations and Depot Maintenance account), and increased overseas Base Maintenance Contract (BMC) costs ($137.0 million) driven by a 34.7 percent inflation rate, primarily in Turkey.

Total requirements in this area increase by $122.2 million between fiscal year 1992 and fiscal year 1993. The increase primarily stems from continuing changes in F-15E force structure (+36 PAA, +$33.2 million); incorporation of full-year DLR funding in fiscal year 1993 (+$238 million) (vice half-year funding in fiscal year 1992) and further increases in overseas BMC costs ($129.4 million) as inflation continues at the rate of 34.7 percent per year. Program decreases continue with the further drawdown of Tactical flying hours ($95.7 million).

INTELLIGENCE, AND COMMUNICATIONS

Through fiscal year 1992 and fiscal year 1993, the Worldwide Military Command and Control System increases slightly through modernization efforts at key operation centers such as the Cheyenne Mountain Complex, Air Defense Operations Center, and Space Defense Operations Center. Long-haul communications and dedicated leased long-line funding requirements decrease as a result of savings achieved through the use of circuit bundling. Management headquarters requirements decrease as a result of the Air Force command, control, communications and computers (C4) restructuring. The ADP area includes programmed growth in fiscal year 1992 and fiscal year 1993 which will fund the initial investment required for the AF implementation of regionalization of ADP operations and design centers. This regionalization will generate long term savings for the Air Force as will the Corporate Information Management (CIM) efforts underway.

Space support programs reflect increases in fiscal year 1992 for Space Boosters, the Consolidated Space Test Center (CSTC), and the Consolidated Space Operations Center (CSOC). Space Booster funding provides an increase for launch services for Medium Launch Vehicles to support an increased number of launches. There is also an increase in fiscal year 1992 to provide for CSOC's contractor maintenance and the support for activation of a mission control complex. The other major fiscal year 1992 increase is for the Eastern Space Launch Facility (at Patrick AFB, Florida) which provides an acceptable level of launch support for the approved launch schedule and enhanced safety requirements. Previous years funding only allowed for a degraded level of launch support for the given launch schedules. The Air Force is taking steps to insure that its infrastructure will support a reliable safe launch environment as we increase our reliance on Expendable Launch Vehicles (ELVs). The fiscal year 1992 funding also includes significant decreases for the transfer of Titan IV launch operations funding from O&M to Missile Procurement and completion of the DOD Space Shuttle mission program. In addition, there are two major decreases between fiscal year 1992 and fiscal year 1993: (1) reduction of Upper Stage program support to the Space Shuttle program, and (2) phase-out of Titan IV solid rocket motors and transition to the less costly Solid Rocket Motor Upgrade (SRMU).

Other changes include increases for allied and contractor logistics support for the new Automated Weather Distribution System (AWDS) and the Next Generation Weather Radar (NEXRAD) systems. In addition, increases provide for continued software improvements in the AF Global Weather Central (AFGWC) program.

AIRLIFT FORCES

Requirements in Airlift Forces appear to grow significantly between fiscal year 1991 and fiscal year 1992. Actually, the perceived growth is the result of a $1 billion transfer from the Military Personnel appropriation into O&M. This transfer provides for implementation of cost per output pricing techniques in the Airlift Services Industrial Fund (ASIF). Under this concept, the O&M appropriation will begin reimbursing ASIF for its assigned military personnel. Other fiscal year 1992 increases in Airlift Forces reflect VC-25 Contractor Logistics Support (CLS) requirements ($8.1 million) and initial half-year funding for Depot Level Reparables (DLRs) ($43.7 million). Offsetting program decreases primarily include reductions in Base Operating Support (BOS) and Real Property Maintenance Activity (RPMA) requirements ($103.0 million). Airlift Forces funding declines slightly (-$10.0 million) between fiscal year 1992 and fiscal year 1993.

CENTRAL SUPPLY AND MAINTENANCE

The Air Force Central Supply and Maintenance Program has undergone a tremendous number of changes in business practices which transferred functions within, and outside, the Air Force and will generate a number of efficiencies. All Air Force Commissaries have transferred to a new DOD organization, the Defense Commissary Agency (DeCA). Another example of change is the reflection of the evolving relationships between O&M, AF and the Stock Fund, such as the implementation of Depot Level Reparables. The fiscal years 1992-1993 budget highlights the transfers of logistic support functions, such as automatic data processing (ADP) and transportation, to more appropriately align all related costs to the Stock Fund. In addition, all remaining AF logistics and acquisition functions took an active role in the Defense Management Review and have been streamlined to reduce organizational redundancy, eliminate manpower and overhead and implement Total Quality Management programs. The logistics functions are well prepared to support the quality forces the AF deploys and maintains.

TRAINING AND EDUCATION

Our Training and Education program reflects funding levels commensurate with declining force structure. Funding for several programs was transferred into Major Force Program 8A beginning in fiscal year 1992. Most notable is a transfer of $51.3 million to accommodate centralized funding for Child Development and Family Support Centers. Implementation of our Acquisition Professional Development Training program which began in fiscal year 1991 continues through fiscal year 1993.

MEDICAL PROGRAMS

The Air Force Medical Program remains relatively constant except for decreases associated with force structure. One major change in the administration of the Medical Program is the termination of the Joint Military Medical Command effective October 1, 1991. This action transfers the Brooke Army Medical Center and associated clinics ($106.4 million) back to the Army and realigns the remaining assets within the Air Force. The Air Force continues to actively pursue methods for containing the rapidly increasing cost of medical care. We are expanding a series of inhouse medical services to reduce reliance on the more expensive CHAMPUS program.

To fully test and evaluate the Catchment Area Management Concept, we have funded (Direct Care and CHAMPUS) the Catchment Area Management test sites in Arizona and Texas. CHAMPUS is fully funded in fiscal year 1992 ($1,057.7 million) and in fiscal year 1993 ($1,193.2 million) as currently projected by the most recent CHAMPUS Actuarial Projection System (CAPS).

ADMINISTRATION

Funding for administrative support to departmental and major administrative headquarters, field commands, and associated activities significantly declined due to force structure reductions, reduced mission requirements, and increased efficiencies. For example, the Air Force complied with fiscal year 1991 congressional language and decremented the departmental headquarters account to reflect programmatic negative real growth of - 13.6 percent in fiscal year 1992 and - 9.4 percent in fiscal year 1993 after price growth and functional transfers are discounted. All other administrative programs remained relatively constant.

SUPPORT TO OTHER NATIONS

Resources required to pay the United States' share of support to North Atlantic Treaty Organization (NATO), Supreme Headquarters Allied Powers Europe (SHAPE), NATO Airborne Early Warning and Control (AEW&C) and other international headquarters remained relatively constant except for a small decrease ($.5 million) associated with force structure reductions.

PEOPLE

People underwrite all of our efforts. We must continue to attract, high-quality people to the Active and Reserve forces; and retain those in whom we have already made a substantial investment; without them, we will be operating at a less-than optimum level, unable to exploit the technological capabilities of our advanced weapon systems. At the same time, we recognize the need to get the most out of our past and future investments in hardware, and we continue to leverage those investments by maximizing the readiness of our present forces, and by improving existing systems through cost-effective modifications and upgrades. Civilian end strengths decrease by 30,693 from fiscal year 1991 to fiscal year 1992 primarily as a result of functional transfers and a continuation of civilian hiring limitations started in fiscal year 1991. The transfers include: Establishment of the Defense Business Operations Fund (DBOF); establishment of the Defense Commissary Agency; and return of Brooke Army Medical Center operations to the Army after dissolution of the Joint Military Medical Command. Between fiscal year 1992 and fiscal year 1993, end strengths decline another 239 due to less support requirements tied to troop reductions. In addition, civilian pay requirements decrease $20 million in fiscal year 1992 and $200 million in fiscal year 1993 as a result of additional overseas burdensharing initiatives. Decreases are somewhat offset by increases for the Child Care Program, foreign currency, and projected civilian pay raises (4.2 percent in fiscal year 1992 and 4.7 percent in fiscal year 1993).

FLYING HOUR PROGRAM

The strategic, tactical and airlift flying hour program declines 10 percent between fiscal year 1991 and fiscal year 1992, and 6.6 percent between fiscal year 1992 and fiscal year 1993. The flying hour decreases are directly related to major force structure reduction actions. First, Active Air Force Tactical Fighter Wing Equivalents (TFWEs) decline from 21.6 to 17.08 in fiscal year 1992, and further to 16.08 in fiscal year 1993. Second, the number of primary aircraft declines by 497 between fiscal year 1991 and fiscal year 1992; and an additional 310 between fiscal year 1992 and fiscal year 1993 (a total of 807 primary aircraft). The most significant reductions in aircraft occur in the B-52, F-4, and KC-135 weapon systems.

BURDENSHARING

Burdensharing constitutes a congressional initiative directed at achieving a more equitable sharing of financial responsibilities between the United States and its allies. While the fiscal year 1991 DOD Appropriations Act reduced foreign national pay by 25 percent, the Air Force cannot reach this goal in fiscal year 1991. First, there are existing international agreements, including but not limited to the Spanish and Greek Defense and Economic Cooperation Agreements (DECAs), NATO Status of Forces Agreement (SOFA), Philippine base labor agreement and the Azores base labor agreement which include certain requirements affecting foreign national pay; e.g., notice periods for separation.

Currently, the Government of Japan (GOJ) defrays about 57 percent of the cost for support required to maintain U.S. forces in Japan (excluding the pay of military and U.S. civilians). The Korean Combined Defense Improvement Projects Program (CDIP) funds only requirements directly related to the warfighting capability of South Korea and the combined defense of the peninsula. In fiscal year 1990 the GOJ picked up, in its entirety, all allowances and benefits for foreign nationals. The Air Force baseline was reduced in fiscal year 1991 and the outyears to reflect these savings. The GOJ now proposes to also pay the basic wages of Japanese personnel working for the U.S. forces via a 5-year plan that envisions annual budget increases each year up to 100 percent by fiscal year 1996. The Air Force budget submission for fiscal years 1992-1993 reflects a decrease of $20 million in foreign national wages in anticipation of the GOJ Diet approving the 5-year plan to pay wages and a decrease of $200 million in fiscal year 1993 in anticipation of host countries providing additional support and funding for both pay and allowances.

The Wartime Host Nation Support (WHNS) agreement between the United States and Germany is a wartime contingency agreement whereby, in times of crisis or war, German reservists will provide air base defense, airfield damage repair, casualty evacuation, and equipment maintenance and support to U.S. bases in Germany. The costs of outfitting and supporting this capability is shared between the United States and Germany. The U.S. share is $3.7 million in fiscal year 1992 and $6.5 million in fiscal year 1993.

DEFENSE MANAGEMENT REVIEW DECISIONS

In July 1989, the Department of Defense completed its analysis requested by the President of major actions needed to improve the Department's management. Contained in the Defense Management Report (DMR), the recommended actions call for streamlining the Department's operations and saving substantial sums, while maintaining essential combat capability. This is being accomplished through reducing overhead, eliminating redundant functions and improving business practices. The first major installment of this effort was reflected in the fiscal year 1991 budget and will continue well into the 1990s. In the fiscal year 1991 Round I of the DMR process, the Air Force share of the $39.1 billion total DOD savings/budget reductions for all Air Force appropriations was $9.3 billion over the period fiscal year 1991 through fiscal year 1995. In this budget, DMR Round II savings/budget reductions add an additional $6.4 billion to the Air Force share of the DOD total of $12.9 billion for the period fiscal year 1992 through fiscal year 1997.

SUMMARY

In summary, with the support of the Congress, the O&M appropriation will be able to provide for the day-to-day operation, maintenance, and sustainability of fielded weapon systems and the necessary support functions essential to meeting mission requirements. Again, the O&M appropriation is the underpinning of readiness and sustainability. The fiscal years 1992-1993 O&M budget reflects the minimum dollars required to properly support the given force structure and activity levels necessary to achieve Air Force mission objectives.

Senator DIXON. Thank you, General.

May I first say to my distinguished colleagues that we will operate under a fairly loose 6-minute rule for questions. I should state at the outset to both of my distinguished colleagues, in the event that they do not know, that the suggestion of Mr. Shycoff to consolidate four existing stock funds and four existing industrial funds into a single large revolving fund, which he calls DBOF, has not met with approval in the House.

The House Armed Services Committee apparently, based on the recommendations of the General Accounting Office, did not include the suggestion of Mr. Shycoff in their mark-up, which has just been concluded, and prohibited the creation of the DBOF concept, at least until fiscal year 1992.

Now that obviously does not mean that we cannot do otherwise here in this subcommittee, recommend otherwise to the Armed Services Committee in the Senate and mark up differently; but it immediately suggests that it is a conferenceable item with the House, which apparently takes exception.

I thought I might go into that right away, Mr. Shycoff, and bring that out in the open. The General Accounting Office apparently testified, I take it this is the House, and I quote directly:

"Although we support Defense's efforts to determine the full cost of support operations, we do not believe that Defense is in a position to implement the Defense Business Operations Fund, DBOF, at this time. Defense does not have the policies, procedures and systems in place to implement and operate the fund in a businesslike manner."

I am informed that on the basis of that view, expressed to the House, the House Armed Services Committee did not include your concept in its mark-up. Would you enlighten those of us here, because we represent both sides of the aisle, and we will of course pass along to the full committee your view so that it can receive the full attention of the committee.

Mr. SHYCOFF. Yes, I would be happy to, Mr. Chairman.

I am well aware of the GAO testimony. The reason we believe that it is wrong, and we hope this committee would not go along with the House, is that what we are doing in 1992 is in place today.

As I alluded to earlier when I used the shipyard as an example, the primary thing that will be different in fiscal year 1992 for the existing revolving funds is the name change. They will operate under the policies and procedures that are in effect this very day, and that they have been operating on mostly since 1951.

Senator DIXON. There would not be any direct line authority under you then, with respect to this? There would be a name, but there would still be, in fact, eight separate funds? Am I to understand that——

Mr. **Shycoff**. There would be a single fund in total, called the Defense Business Operations Fund. Within that fund, there are numerous business areas. There would be a Navy shipyard, for example, as one of the business areas. Air Force depot maintenance is one of the business areas.

They would have the same relationship with the Secretary of Defense's office that they have today. Last fall we reviewed and approved their budget. We provide our holy water, if you will, on what we, acting as a board of directors and the Secretary being the chief executive officer, would expect their costs to be next year.

We present that to you as a year ago we presented you a budget on the Navy industrial fund. Your staff has a chance to review it and make recommendations to you using GAO reports, IG reports, anything else, as to whether or not they are efficient or inefficient and what changes you might want to see in their costs, which you then pass on to the customer's budget.

Senator **Dixon**. May I interrupt at that point? If the new fund will not make any changes in the day-to-day operating responsibilities of the existing funds, I do not understand why GAO was so critical.

Mr. **Shycoff**. Neither do I.

Senator **Dixon**. I mean it is just a name.

Mr. **Shycoff**. Neither do I.

Senator **Dixon**. Then I will put it another way. If there are not any changes at all, why do you want to do it?

Mr. **Shycoff**. For two reasons: One, as I alluded to before, that we send a message to our employees, and our managers. There is a change beyond that we can put in the future, as we work within this, to the accounting transactions that I alluded to that take place within the fund.

As these business areas buy from each other, we have, today, a tremendous number of expenditure transactions, they write checks to buy from each other, and we know we can make a big savings in the way that is done.

But we do not expect to do that on the 1st of October. On the 1st of October we expect to put in the framework by which we will do business.

Senator **Dixon**. May I just ask this, not necessarily today, I hear what you are saying, I think you are saying the name is all that is going to change now. But may I ask you, will the creation of DBOF move the day-to-day management of these activities under this fund from the various military services to the Office of the Secretary of Defense in time? Is that your plan?

Mr. **Shycoff**. No.

Senator **Dixon**. I do not necessarily say it is bad.

Mr. **Shycoff**. No, it will not.

Senator **Dixon**. That is not your plan?

Mr. **Shycoff**. No, that is not our plan. We do not see any change in management.

Senator **Dixon**. Could you just simplify for me then, why is this desirable, if that is not the case. In other words, I remember the big fight on the Under Secretary of Defense for Acquisition. That is still out there, and that debate will probably go on for a long time, about the direct line authority of all procurement and the duplications.

But let us keep it on this right now. What are we trying to get to here?

Mr. SHYCOFF. I will try. We are trying to get a focus in our business areas on the cost of doing business. We want each of the business areas to focus on their costs. We want to relieve them of the attendant, if you will, treasurer responsibilities. That will move to my office, keeping the books for them.

By having a single account, we can keep the books at a different level. We can have them not worry about something called cash, which is a very misleading term, in terms of what is in the bank as of any day.

The thing that our managers do is incur costs. They obligate the government on a day-to-day basis. We want them to focus on that. We want them to focus on the cost of doing business, and not focus so much on what the current fiscal condition of the company is.

What does move to our office and to a higher level within the services, is the financial condition of the corporation, that is what we gain out of DBOF. But in terms of the day-to-day costs, the day-to-day management, the lines will be exactly the same as they are today; through the service secretaries, to these gentlemen, down to the individual activities.

Senator DIXON. Senator Mack?

Senator MACK. I would just follow on with that. Again, why is GAO so—I mean, why have they come out in opposition to this? And I guess the other thing, as it comes to my mind, are you suggesting that there are any savings from taking this action in 1992?

Mr. SHYCOFF. We did not take any savings in the budget in 1992. We think over the long run there definitely will be. We have significant savings, over $70 billion over the next 5 or 6 years identified with the Defense Management Review, and we believe this kind of a financial system and emphasis will help us achieve those.

Senator MACK. How important is this decision to do with DBOF in the accomplishment of the $70 billion in your opinion?

Mr. SHYCOFF. It is hard for me to say. I think it is important, in that we have to do what has taken place in the private sector, and that is turn our managers on, turn our employees on. How many people in the Department of Defense came to work today and said, I want to do my job, my best possible job for the lowest cost?

I think this is important. This is a message. This helps us get that.

Senator MACK. Tell me again how you are going to accomplish that with DBOF.

Mr. SHYCOFF. We will accomplish that over the long run because we are going to operate our businesses with a focus on the cost per output. What is it I do? How well do I do it? What does it cost me to do it?

Senator MACK. How are you going to do that though? How does that work down through the system? What are you going to do out there that is going to change that attitude?

Mr. SHYCOFF. First, we are going to give them a better financial tool. Today, and last year, if you were the manager of a supply depot, I would have told you, here is $30 million to manage your depot for the year. What we now say to you is, instead of funding you on a total dollar basis, we say, we do not know how many boxes are coming in and out of that building, it depends what your customers bought, what your customers order, but we expect you to manage for $15 a box.

By the way, last year, it cost $17 and over the next few years, we want you to look at getting the cost down. We are going to treat you more intelligently. The other thing we are going to do is instead of giving you your military personnel money over here and your O&M money over here, and your supply money over here and your procurement money over here, and saying I am going to put a fence on this and a fence on that, and then say, but by the way, we want you to manage better—we are going to say, manage your product, do your job at this cost per output. Here is the flexibility.

We have a better measuring device, cost per output, and based on that, we think treating the manager more intelligently, giving them a better tool, that in the long run it will reduce costs.

Senator **Mack**. You mentioned in your comments, earlier comments about capital budgeting. What role does capital budgeting play in the $70 billion in savings? Does it have any impact?

Mr. **Shycoff**. Again, we have not made any attempt to price this out as a savings device, none at all, in terms of the calculation of the $70 billion.

Senator **Mack**. Capital budgeting then is a—you are going to use that in the financial records in the approach that you use in trying to get your managers to operate their businesses more efficiently?

Mr. **Shycoff**. Yes, and there are two aspects of that, Mr. Mack. One, these businesses have not historically fared too well within the department in terms of the share of resources. They are in the same appropriations where they compete with weapons systems. When it comes time to get to that last number and you have a choice between buying a lathe for a shipyard or a forklift for a supply depot and buying another sonar or radar, it is not surprising that we can always postpone that lathe or forklift to the next year.

We did a study quite a number of years ago on the level of capital investment that the private sector might make in an industrial activity, for example, and at the time, if my recollection is right, we found that most businesses are in the 5 percent of sales range, which may or may not be the best measure, and we are down around the 1 percent.

It does not come as much of a surprise that over the years we may not be as productive as others, and that you and I probably would not buy stock in those companies.

One of the advantages of this funding change is that these dollars are no longer in those separate accounts. They now show up and are justified as part of the cost of these businesses. We can talk to capital investments in terms of what they are going to do downstream for these businesses, and as important, a few years later, because it shows up as a depreciation cost in the funding of those businesses, we have a chance to measure what somebody may have sat at this table and said 5 years ago in terms of what we are actually seeing.

So we are saying we get better accountability, better responsibility and also a better tie-in of the request itself.

Senator MACK. I appreciate those comments, and I must again, from drawing on my own experience in business years ago, I would have been approaching, I think from the same perspectives that you have been talking, but quite frankly, I have not quite figured out yet how it works, and I am somewhat concerned about the General Accounting Office who I would think would be encouraging this kind of activity, to come out and say that they do not support it.

We really need to get some answers to that, at least to make me feel comfortable about going forward.

Senator DIXON. I think I share the observation of the Senator from Florida——

Mr. SHYCOFF. So would I. I would like to add a little. I was really quite upset. We spent quite a number of hours with Mr. Chapin and his staff, going over this. We have read reports over the years about the way the government should operate, about capital budgeting.

We have a number of problems in our accounting systems in the Department of Defense and most of their criticisms, that we do not always have good accounting data; are very well taken,

Those problems are not going to be solved overnight. We are working with a number of efforts to improve them. If we have to wait until we solve every financial problem and accounting problem in the Department of Defense, we are just not going to get there.

Our position, and where we differ with the GAO, is that we can get some benefits now. We are not corrupting the system. We are not harming the system. We have gone very gradually, by not rushing into it with a whole bunch of additional businesses.

We are looking at a whole bunch of support activities, all of the support activities of the Department over the next few years, but we have held off to just those few where we are confident that those systems are in place today, with their faults, but that we need to get a start. We need to get that message out to the Department.

Senator DIXON. Senator Lott?

Senator LOTT. Thank you, Mr. Chairman.

Perhaps just a couple of observations first and then some questions. In listening to what you were just saying, we all acknowledge that there have been some accounting problems at the Department of Defense.

But I submit that they are accounting problems. They are not military service problems. They are not caused by the men that are sitting here in uniform today. They are accounting problems. That is where the problem is. You ought to solve the accounting problem and not complicate the job that these men have to do which they have done very well, as we have just seen in Desert Shield/Desert Storm.

I have heard the comments about running the Department of Defense like a business. Well, I guess that is okay, but they are not in the business of being a profit making business, they are in the business of defending the country and defending peace wherever the need may be. So they have a different role than just doing business.

Now, one other thing you mentioned would be a board of directors to review this. Who is the board of directors?

Mr. SHYCOFF. The board of directors we are talking about are primarily the financial managers of the Department, myself, and somebody from the USD for Acquisition, and again, that board's review is from a standpoint of policy: is the system in place? Is this business ready to go?

Again, it is not from the standpoint of the management of the operation, but to ensure that before we add another activity to this account, we are going to have a consensus, have representatives of the services that say yes, we are ready; yes, this is the right way to do it. Yes, it makes sense to put this in.

Senator LOTT. Are financial managers going to make military decisions?

Mr. SHYCOFF. Senator Lott, we are talking about whether in the operation of something such as a warehouse, we can improve the business operation.

Under this system, it is the military operator, the one who sets the requirements, who comes up and asks for the funds.

I would like to use as an example of the way we do business today and how we are expanding on it. The Defense Logistics Agency buys all of the fuel for the Department of Defense, but they do not come up and ask this committee for the dollars for fuel.

When General Finan was talking about flying hours, what he was talking about was the cost to fly the airplanes, the cost to steam ships, that includes the cost of fuel. What we do in the Department is say to the Defense Logistics Agency, you be the single manager. You go buy the necessary fuel. You have it when the services need it.

Can you imagine what it would be like if instead of that, the Defense Logistics Agency came up here and said, "I need to buy 150 million barrels of fuel next year" and you said "why, it was only 140 last year," and DLA said, "I do not know, those guys in the blue said they are going to fly more this year."

What we have instead is the right guy, the right service coming up and defending a military requirement. We have a whole series of support activities that under the current structure, have become ends in themselves, and they are not ends in themselves.

The reason that they exist is to support the operating forces. What we want, what this committee wants when it asks for mission budgeting as it has in the past, is to basically get a better focus by insisting that the management of those support businesses, and I am stubborn, I continue to call them businesses, are not ends in themselves, but exist only to support the operating forces. Our goal is to have the funding reflected in the budgets of the operating forces, the people who set the requirement, and then the level of business that takes place in one of these support activities are set by the operating forces as they sail their ships, as they fly their airplanes, because that is what sets the level of support required. So we get a much better tie-in, and the focus in these businesses is providing that support for the lowest possible cost and providing it in a quality manner.

Senator LOTT. Well, answer this question. It has been suggested that what you are proposing here centralizes and moves decisions to the top. Whereas, that was the trend 20 years ago, the trend in successful business in industry today is the reverse. You try to get the management decisions down to the lowest possible level, closest to the people on the line.

How do you respond to that?

Mr. SHYCOFF. I think we are doing that. I know we are doing that.

Senator LOTT. You are doing which?

Mr. SHYCOFF. Moving it dcwn to the lowest possible level.

Senator LOTT. You know the military service people, a lot of them, do not feel that is what is happening. They feel it has been taken out of their hands, moved up to some centralized board of directors, and they are going to be told this is what you can do militarily because this is our financial or auditing decision.

Mr. SHYCOFF. Again, the board of directors is only looking at the question of policy for the account, not in terms of the day-to-day management. The day-to-day management is unaffected.

What we have as a goal, and what we are trying to talk the services into is that we provide the maximum flexibility to a manager. What we do is we set, and you set, as the board of directors, if you will, for this company what level of cost you expect a manager to achieve. And our philosophy is to decentralize and provide as much flexibility to manage as possible. I used an example before of the manager of a supply depot to whom you might say, we expect you to manage within this cost goal. I do not believe that that is a usurpation of his management flexibility. What we are going to give him is a cost goal that we expect him to operate at for the year.

Senator LOTT. You know you touched on something there that struck the cord with me. I have always viewed us as the board of directors for the DOD and the fact that you are going to have one does not set real well with me quite honestly.

And it sounds to me like you all are going to have your hand so deep in the decision making process that I do not want you in. I want him making those decisions.

Now, let me just ask you this. Does this DBOF require congressional legislation to be implemented?

Mr. SHYCOFF. No, it does not, but we have submitted cleanup legislation that would change the wording in the existing law, which currently gives the Secretary of Defense authority to establish revolving funds, to change the name of the revolving funds to DBOF.

Senator LOTT. Is that what the House Armed Services Committee did not authorize or approve?

Mr. SHYCOFF. They went well beyond that. The House Armed Services Committee provision would take away from the Secretary the authority that he now has.

Senator LOTT. Can the capital budgeting or the old asset capitalization programs be implemented without DBOF?

Mr. SHYCOFF. Yes.

Senator LOTT. Can it be done without legislation?

Mr. SHYCOFF. Yes.

Senator LOTT. If the DBOF system is accepted by Congress or, authority is not taken away, and DBOF is implemented by DOD, will it evaluate objectively and honestly the benefits of the changes made under the DMR? If at some point it shows that it is not working, or it actually shows increases, would there be a commitment or a process to reverse the DMR directives?

Mr. SHYCOFF. I think, in a number of instances, the focus on cost per output will provide us better information than the previous system on the impact of certain DMR decisions. I am confident that if the information proves the decision to be unwise, management would change it. But we will have better information as a result of this.

Senator LOTT. One of the criticisms I have heard of this is that it is not being evaluated objectively. I hope to have an opportunity to express my impression to Secretary Cheney that the decision has been made that when the military man comes in and says, "This will not work, you have 11 reasons here, the presumptions are just false", that they are just told thank you very much. They are told thank you very much, this is what we are going to do. Are you going to listen to the admirals and the generals who are out there having to deal with this in an objective way and hear them—not just pass the word down, but listen to what they are telling you will be the effect on the job they have to do?

Mr. SHYCOFF. Certainly I believe that we can take——

Senator LOTT. Not as criticism. I think the word I should use is suggestion. Look, Mr. Secretary, this is just causing disruption and problems and will not work for these reasons.

Mr. SHYCOFF. I think that is reflected in what we call the board of directors of the DBOF which, again, as I said, we have asked for the membership of the services and the defense agencies so that they will have a sense of ownership, so that they have something to say, rather than having our office set the policy. And as I said, we will not put anything into the DBOF without their concurrence. So I feel that just our action there is an expression of what was behind your question.

Senator LOTT [presiding]. Do you want to jump back in here, Connie?

Senator MACK. Well, frankly, I would like to get away from the issue, but I still want to ask a few more questions related to it. The concept is beginning to come through to me and I would like you to tell me whether I am right or wrong on this. It sounds like this board of directors will, let us say, analyze the cost of operation for doing certain activities and try to conclude—that sounds like it is to high, you guys ought to be able to do it for a lower figure.

Mr. SHYCOFF. Not quite. We have an existing process, Senator Mack, where a business activity works through its service, through the budget offices represented here by the witnesses in terms of what the business area requirements are. Again, if it is a shipyard, it would submit its budget to the Naval Sea Systems Command. They would submit their budget to Admiral Hancock's office, who would submit it to ours; each one along the line looking at the budget in terms of the cost of doing business. What does it cost us?

Ultimately, we submit that to you, and your staff here has been given a display for each of these business areas and what we expect the cost to be and what last year's were. And we get questions from the staff on why it is different than it was last year. And you sometimes, many times, say to us; your costs are overstated, you are not running your business efficiently; we expect you to do it for lower cost and we are going to take money out of the customer's account, because he is not going to have to pay as much because you are going to do business better.

Well, we go through that same process within the Department before it gets to you, with the Secretary of Defense ultimately making decisions. That is not changing.

The only thing that the board of directors is doing is looking into the process and saying, hey, in your area called supply depots, is this the right measure for us to look at? How shall we measure those? What should the focus be on that? We are now looking at training. We will have a discussion to determine what is the output of a training establishment? Believe it or not, answering that took 3 months when we were looking at training to see if it should be included in DBOF in the future. What do they do? How do we measure it? Do we have a good system in line? Can we put them in? You do not see training up there yet. We are ready to put it in; but we have not come to consensus.

So the role of the board is to say, yes, we are ready to put it in. Does it make sense? Is there a customer? Who is the customer? Where would you put the money in the budget? Who is the customer of training? Who would you give the dollars to? We do not know those answers today and that is what the board is designed to do rather then us doing it singly. But the decision process on the level of cost is unchanged from the way we do it today.

Senator MACK. Okay, let me just ask the same question again that I asked earlier. Maybe I will rephrase it in the sense of how important is putting DBOF in place in reaching the savings that you all have projected over the next 5 or 6 years?

Mr. SHYCOFF. We did not make any significant estimate. We assumed a 1 percent productivity savings in these businesses per year within that $70 billion. My own view is that significant reductions in the cost of doing business are possible in our support establishment if we provide our managers better tools, a better way to manage, if we take advantage of all of the things that are going on in this country, the changes in culture, the way we treat people. This is just a financial system to support that. Can I quantify it? No, I cannot. I do think we can significantly lower the cost, but I really cannot quantify it.

And we have really attempted to stay away from giving the impression that this is just another budget reduction. One of the problems we have, of course, is that many of our people out there think all the comptroller types are interested in is finding a way to reduce their budget. And so we have not laid a dollar number on this per se.

Senator MACK. Thank you.

Senator LOTT. We only have about 4 or 5 minutes. We are going to need to go vote. If the panel would be so kind and just relax a minute. I believe that Chairman Dixon will be right back. He left early so he could come back. Within about 5 minutes I am sure he will be prepared to pick up more questions, and we will be back for some more questions, too.

Thank you. [Recess.]

Senator DIXON [presiding]. Folks, I hope this serves to shorten the inconvenience to our distinguished witnesses and the spectators to some extent. Senators Lott and Mack were just getting on the elevator as I came off, and I am sure they will return.

Let me ask you one or two more questions, Mr. Shycoff, and then I will go along to some of the other folks so that there is some shared time among the witnesses. May I ask you, Mr. Shycoff, the exchange rates for the German mark and Japanese yen are more favorable compared to the U.S. dollar than they were when you put the budget together. How much would that make a difference here?

Mr. SHYCOFF. I think if the exchange rates were to stay as they are today, the difference would be in the range of $300 to $500 million next year. We do have some concern that in articles we read recently, you may have seen them, that if interest rates went down further in this country and did not in others, that maybe the dollar would drop back again. But the answer to your question is if it stays the same, it would be $300 to $500 million.

Senator DIXON. Incidently I do not know what my colleagues asked in my absence. If I do anything repetitious here, I know you will let me know.

Mr. SHYCOFF. We will try to give the same answer.

Senator DIXON. Well, that would be good from the standpoint of the record.

Mrs. Leiby, the Army's recruiting budget increased again this year despite the continued reduction in the size of the Army—a total increase of 8.1 million in 1992, and 9.2 million in 1993. The Army seems to keep downsizing, but the cost of recruiting goes up. Could you explain that?

Mrs. LEIBY. Yes, sir. When you take out the effects of inflation and civilian pay raises, in fact the recruiting budget decreases slightly from 1991 to 1992 and then remains flat, going from about $253 million to about $250 million in each of the subsequent years. So in fact, it does not increase once you take out the factors of inflation.

However, despite inflation, we have been drawing down significantly the recruiting budget from fiscal years 1990 and 1991, down into where we are now in 1992 and 1993. We closed seven battalion's worth of recruiters, and we closed over 200 different recruiting sites. However, as long as we have a national policy such that we want our force to be representative of citizens throughout this great country, then we have to maintain a recruiting presence in States everywhere so that we can recruit them into the Army. So, for that reason we felt we brought down the structure sufficiently and the costs to the point where we have to keep the recruiting sites that we have left in the budget open to maintain our forces.

Another part of the recruiting budget is also the advertising piece. As we look at a smaller population—and the demographics prove that there will be a smaller pool of applicants for us to draw from into the services and, of course, we compete against industry for those applicants—the propensity is not to join the Army. In order for us to maintain a quality force, we have to keep a fairly constant advertising budget to keep the presence of the Army in front of people to attract them to come and join the Army.

The third part of the recruiting, advertising, and examining budget is the examining part. This is a joint mission that we perform for all of the services where we test everyone and then we actually run the Military Entrance Processing Commands (MEPCOM) that actually bring people into the forces.

Again, in order to keep costs down, we have to keep the current number of MEPCOMs. We have to take people to the MEPCOM to be tested before they can actually commit to join the military and write a contract with any of the services. Costs would go up in terms of travel and time, and we might lose applicants if they had to go extraordinarily long distances for this testing, counseling, discussion, and so forth, and then come back to sign the contract. Therefore, we keep that part of the budget consistent with where we have some of our recruiting stations. So in reality, we have to keep the budget flat.

We are also drawing down the force consistently at an even pace over time. We are doing that through various processes. We will be having boards to remove officers. We will not continue on enlistments—everybody will not be able to reenlist based on quality. And to follow the guidance of Congress, we will be reducing accessions as well. All of these factors have been taken into account when we determine the size of the recruiting budget.

Senator DIXON. I think it is a fairly extensive and reasonably persuasive response to the question. It occurs to me that if we keep downsizing and the cost of recruiting keeps going up, it is an odd situation. There is, I am sure, some decent explanation.

One of the things that I think is somewhat persuasive, you claim, as I take it, that you need these recruiting stations around the country and that a certain amount of that presence is necessary to get a kind of demographic representation everywhere. I think I would be persuaded by that.

I wonder why the advertising has to stay at the same level. I am not trying to be argumentative with you, but even the Government concedes we are in a recession now. It must be pretty hard to get a job out there with more people ready to fill those jobs.

Mrs. LEIBY. Sir, in recent years the quality that the Army has recruited has improved remarkably. I think you are familiar with the fact that we have different categories—mental categories—and we have now reduced almost to zero if not to zero mental category 4. We are not seeking to just bring warm bodies into the Army. We want it to maintain a quality force. We saw that in the effectiveness of Desert Storm, and the folks were able to certainly support our technical requirements.

Senator DIXON. I am not arguing with that. 97 percent high school graduates, I think is terrific, it is one of the reasons we did so well over there.

General Arick, I noticed the same thing with the Marine Corps. Without going into a detailed explanation—I thought Mrs. Leiby did pretty well with that—I again call to your attention this same thing we saw last year, and we continue to see, the recruiting goes up while numbers go down.

General ARICK. Sir, our recruiting budget has in fact been reduced somewhat. Our Director of Personnel Procurement has taken it upon himself to zero out—essentially zero out our paid media advertising budget this year to accommodate the lower top line on the dollars that he has been given. That hurts somewhat, but that is how he has seen fit to cope with the lower top line.

Senator Dixon. Well, it is still up a million this year and 2.3 million next year.

General Arick. Sir, I will have to take that for the record, if I may?

[The information follows:]

With inflation taken into account the Marine Corps' total force recruiting and advertising budget is not increasing. In fact, our budget has experienced negative growth since fiscal year 1987 and our advertising budget has been reduced by over 48 percent since fiscal year 1990. Our fiscal year 1992 and fiscal year 1993 budget request is straight-lined from our fiscal year 1991 budget with a small amount added for inflation. The following chart pertains:

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
Recruiting	$43,390	$38,793	$42,398	$44,231
Advertising	16,269	10,987	8,319	8,813
Total	59,659	49,780	50,717	53,044
Dollar change		($9,879)	$937	$2,327
Percent change from fiscal year 1990			—15.0	—11.1
Total accessions	41.4	38.8	40.2	37.7
Percent change from fiscal year 1990		—6.3	—2.9	—8.9

Negative growth was exacerbated by reductions in fiscal year 1991 which extended into fiscal year 1992, especially by reductions in advertising.

It is important to understand that there is no one-to-one relationship between end strength and accession requirements. Fiscal year 1992 is a good example. Even though our end strength is going down our recruiting mission is 3 percent higher than in fiscal year 1991. Specifically, the fiscal year 1992 total force enlisted accession requirement is 40,245 based on an active duty end strength of 188,000 and a Reserve end strength of 42,400. An increase in these end strengths will further increase accession requirements.

Recruiting is a substantially fixed cost operation; so when resources are diminished and requirements are increased, future problems can be expected.

Of interest, the increased recruiting activities which were necessary to sustain enlistment goals during Operations Desert Shield/Desert Storm forced a diversion of funds from advertising to recruiting support. This action, coupled a markedly lower advertising budget for fiscal year 1992, effectively negates a paid media program, i.e., no paid television, radio, or magazine advertising. Without a paid media program, awareness, lead generation, and recruiter support will all decrease and make it much more difficult to achieve a healthy start pool for fiscal year 1993, the year that the qualified military available (QMA) reaches one of its lowest levels, 20.9 percent less than in fiscal year 1987. We have found that a strong start pool is necessary for the Marine Corps to sustain a successful recruiting program. So, naturally we are concerned about the effects of the fiscal year 1992 budget on the fiscal year 1993 start pool.

Senator Dixon. Thank you.

Admiral Hancock, this budget maintains the current operating tempo for active Navy ships in fiscal years 1992 and 1993, but it reduces the operating tempo for Navy reserve ships from the current 21 days per quarter to 18 days in fiscal 1992 and 1993. I hate to see that starting to happen.

Again, I do not have any quarrel with Mrs. Leiby's sensible observation about why we did so good over there. Our equipment was super, our people were super and their training was super. And as

Chairman of the Readiness Subcommittee, I hate to see us starting to cut down on such things as flying hours, steaming hours, and the time that we spend in various types of training.

I understand the budget constraints. I do not want to be critical, but I wonder what you think about that observation.

Admiral HANCOCK. I share your concern, Mr. Chairman. That reduction is an impact of a look at the total account for the reserves in the Navy. The operating tempo is a fairly large portion of their total. And so over the last several years, we have grown the steaming days from something under 2 weeks a quarter to the current level of 21 days a quarter. And in an attempt to share an equitable reduction in the total Navy's top line, we thought an attempt to scale back there might not yield immediate degradation in readiness. But I believe——

Senator DIXON. It sounds a little like my friend the Chairman's flexible readiness of last year. I see some evidence of it here.

Admiral HANCOCK. Well, I want to reassure you that I am prepared to examine indicators in the execution of the program that, if that reduction in steaming days appears to be putting us out of whack in terms of Reserve readiness, that we are prepared to reprioritize within the Reserve accounts in order to beef that steaming back up.

Senator DIXON. Good. Some of us hate to see all this downsizing at this level this big already. We feel pretty strongly that what we have left ought to be the best there is in town; from the standpoint of all training, readiness, the kind of equipment we have, and the ammunition, etc. This subcommittee's responsibility is to watch that pretty close.

Admiral HANCOCK. You are absolutely right, sir. The fact that we are devoting almost 60 percent of our total resources to the readiness accounts, I think reflects our continued interest and priority in that area.

Senator DIXON. I thank you for that observation.

Mrs. Leiby, I do not want to make a Federal case out of this, there is always a lot of criticism with every thing that happens, but I do want to point out a recent article in the Washington Post indicating that a two-star Army general sent his enlisted aide to a $1,300 week-long classical French cooking course at a West Virginia resort. I take it you do have training courses for Army cooks at the Army's own cooking schools?

Mrs. LEIBY. Yes, we do.

Senator DIXON. Without pursuing it further, I think it is a bad idea for us to have this occur. It draws the attention of the public to that sort of situation. I wish you would suggest that to your folks.

How much training at civilian schools or courses, and at what cost, has been provided to Army enlisted aides during fiscal year 1991?

Mrs. LEIBY. Sir, I have no idea. I will have to provide that for the record.

[The information follows:]

ARMY ENLISTED AIDES TRAINING

The Army does not have a program that involves sending soldiers to civilian schools for culinary arts. Training of this type is done at the discretion of the local Commander and is not centrally managed. For this reason, it was necessary to request data from the field in order to answer your question. Our survey did not reveal any instances of enlisted aides attending civilian cook schools, beyond the one case to which you have referred. The total cost of that training, to include travel and per diem was $1,554. The Army Leadership agrees that this training was inappropriate and has taken action to preclude its recurrence. Our investigation did reveal that eight other soldiers received professional development training at non-Army taught cook schools during the year. Servicemembers receiving this type of training are expected to share the knowledge they gain with their co-workers upon their return to duty.

Senator DIXON. I wish you would provide that for the record and I would appreciate your sending back to the appropriate folks the fact that those things are brought to our attention when they occur.

Mrs. LEIBY. Sir, I would just like to comment that our Inspector General has looked into this area. He has found that in fact no law, DOD or Army regulations, were violated in this case. However, we clearly came to the same conclusion that it was not a wise point in judgment in the use of Government funds, and the General has been so informed. We are taking measures that this kind of thing will not happen again.

Senator DIXON. I thank you for your comments.

Mr. Shycoff, getting back to the subject matter from the beginning of our discussion today, it is suggested to me - maybe I better ask is this repetitious because I do not want to go into it if it is. [Pause.]

I would not go into this if it was repetitious, but some of the materials we have seen suggest you are planning to put agencies with oversight responsibilities, such as the Defense Contract Management Command and the Defense Contract Audit Agency, under DBOF, which means their funding will come from agencies and activities in DOD who pay for their services.

The problem with this is that some of the agencies or activities who need to be overseen by the Defense Contract Management Command or the Defense Contract Audit Agency might not want the services of these oversight agencies.

What do you think of that?

Mr. SHYCOFF. I think that is correct. We are well aware that we do not want to have a direct customer relationship between those activities and their customers.

By the same token, we do believe that we will be able to have a better focus on their cost of doing business and that we can price their products in such a way as to insulate them directly from their customer.

It would serve an additional benefit, if you will, Mr. Chairman, to both the Congress and the Department in that the level of activity in contract administration and contract audit is a function of the size of the investment budgets.

And again, if we can include the costs in the investment budgets for the support they get, and at the same time, insulate customer controlling of things like contract audit and contract monitoring, we provide better information to the Congress and better information for ourselves.

We have not put them into DBOF yet, but we are looking at doing that in 1993, and we think we can find a way, we think we know how to do that in such a way that they would be insulated. Their costs would be in the investment programs, and we would have, and you would have, better visibility of their costs of doing business.

Senator DIXON. Thank you. May I ask, Mr. Shycoff, about the incremental costs of the Persian Gulf conflict. As you know, the Congress passed the supplemental to pay for the incremental costs of the Persian Gulf conflict during fiscal year 1991.

I want to ask you about next year. How do you plan to pay for incremental costs of the war when the bills do not come in until fiscal year 1992, particularly in the maintenance and repair area.

Could you elaborate on that for me?

Mr. SHYCOFF. Yes. We are still looking at that, Mr. Chairman. The assumption behind your question is correct, that we will have some deferred maintenance costs in that we will not be able to do some of the maintenance until fiscal year 1992.

We are still looking at how we are going to approach the Congress to get the permission to utilize the existing authority. We believe that the level of the Gift Fund and the Working Capital Fund that have already been approved will provide sufficient resources to accomplish that work and I expect that we will be asking to work with your committee and work with your staff as to how to take advantage of those funds, to get this deferred maintenance accomplished.

Senator DIXON. Good. I am going to ask you one more question and then yield to the distinguished Senator from Michigan who always has a great deal of interest in inventory, and I expect, knowing him that he will want to make some inquiries again about inventory today.

Mr. Shycoff, the Marine Corps budget includes $75 million in fiscal year 1992 to continue paying the costs of reconstituting the Maritime prepositioning ships used during the war. Obviously, that is an incremental cost of the war.

Why is this cost being paid with U.S. taxpayers' funds instead of with foreign contributions in the Defense Cooperation Account?

Mr. SHYCOFF. I would say our thinking was not as sharp back in January when we put the budget together, as a couple of months later when we finally came up with the supplemental, and it would appear to us that those dollars can and should be financed in the same manner as I just indicated for the deferred maintenance, and that we could use the funds that are available in the gift account to fund those, provided we get the authority in 1992 to be able to reach into that account.

Senator DIXON. The Senator from Michigan, Senator Levin?

Senator LEVIN. Thank you, Mr. Chairman.

Mr. Shycoff, the Chairman is right, I do have a few questions on inventory. The GAO recently issued a report on uneconomic purchases from the stock funds by DOD agencies.

The GAO found that DOD customers routinely place orders for supplies where the shipping and processing costs were actually higher and sometimes much higher than the value of the supplies being ordered. There were many, many, many cases where the same DOD activity placed two or more orders for the same item on the same day.

They recommended, the GAO did, that the Department of Defense determine the cost of processing a requisition and levy a minimum charge for each order, not a percentage charge which does not come to much if you order a double AA battery and ship it all the way from the United States to Germany and it costs you $20 to ship a 20 cent battery. Putting a 10 percent or 3 percent or whatever the levy is on a 20 cent battery is not going to accomplish anything.

So they recommended a minimum charge for each order, and I am wondering what your recommendation is. I mean, what your reaction is to that recommendation.

Mr. SHYCOFF. In terms of the broad recommendation or the thrust of the recommendation, I believe it is consistent with the approach that we have in mind and the financial goals that I talked about earlier in my presentation, which is that we need to make the cost of doing business available to both the activity doing it and the organization that sets the requirements.

I do not have a problem with heading in that direction. I think rather than going to a minimum charge, we need to find out what that cost is and determine whether it should be a minimum charge. We will look at this but we will not be able to put it in overnight, unfortunately. I agree that there should be a handling charge of some sort placed on it, rather than the surcharge that we use today.

Where we are headed is basically trying to make people aware of the costs and if they are aware of the costs, maybe they will act differently, maybe it will turn out that it is well justified, that this is the right approach; that there is some other benefit that is not as apparent to you and me.

But we are going to head in that direction, and it is going to be a little more complex than just putting a minimum charge in place, I am afraid, Mr. Levin.

In some cases, the depot is able to take those multiple acquisitions and still handle them as one, still pick them up at the same time, still ship them together as if they came in together.

But nevertheless, the general thrust is correct. We need to get away from a surcharge. I saw a similar item to the 20 cent battery when I was in a depot recently. I picked up a 45 cent item, but the problem was not that of multiple requisitions. It was the fact that it was $11 or $15, in that case, to process a 45 cent item.

If we make those costs more visible to our managers, maybe we will try other things, like not putting it in the depot in the first place.

One of these days, GAO will be in here because we pay $2 for a 45 cent item, and I hope at the time you remember that the reason we did was to avoid an $11 handling charge.

Senator LEVIN. We will try to remember that, and I am sure you will remind me if we forget. I invite you to remind me if we do forget.

There is also a question of a surcharge being added for higher priority services, so we avoid some of these requests for high priority shipping, which is very expensive and frequently just absurd and needless.

Is that part of your ongoing review?

Mr. SHYCOFF. Yes, it is. It would come under the heading of something that we need to do in the long run.

Senator LEVIN. When are you going to be resolving this issue?

Mr. SHYCOFF. I think we can resolve the issue in the next few months. What I do not know and have no feel for right now, is how long it might take to change the system, and how deep into the supply system we have to go to make that kind of change.

Senator LEVIN. Would you send to this subcommittee the decision?

Mr. SHYCOFF. Yes.

Senator LEVIN. And give us an estimate when you do send it as to how long you think it will take to implement it down the line. We understand there is a phase-in.

Mr. SHYCOFF. Yes, we will be happy to.

Senator LEVIN. Okay. Last year, Mr. Shycoff, the bill that we passed included a provision which we designed to reduce levels of unnecessary inventory in the Department of Defense and we limited obligations for new purchases in the stock funds to 80 percent of the sales of material from those funds.

There were certain exceptions to that cap and the Secretary of Defense was given authority to waive it.

What has been the impact of this provision on inventory stock during fiscal year 1991?

Mr. SHYCOFF. It is still too early to tell what the impact will be on inventory since we are in the process of purchasing items and they obviously have not been delivered yet.

Furthermore, the impact of Desert Shield and Desert Storm has created quite a bit of uncertainty in the entire supply area. We have, I am told, hundreds of unopened vans on the way back with supplies that were sent over.

There were, as you would understand, many purchases made, not knowing that the war would actually last only 100 hours, and it is understandable that we had a lot of purchases that are going to effect that data. So at this time we really cannot judge exactly what the impact of that is going to be.

Having said that, we have continued that policy for many of the commodities that were bought because we need to reduce that inventory and because we are buying for the future, whether 80 percent is the right amount or not in the future would be hard to get at, but again, I have used the term business here a few times, and like anyone with a large inventory, with impending sales going down, we have to make that difficult decision of precisely where to draw that line.

It is a difficult one when you are managing 5 million items, because each item acts differently and we do make those decisions up here. They are made by the item managers on a day-to-day basis for those entire 5 million items.

But I would expect you will see inventory coming down in the future and this will be one of the contributors to that inventory going down.

Senator LEVIN. My time is up. I will save my other questions for the record. Thank you.

Senator DIXON. I thank the distinguished Senator from Michigan. Senator Lott?

Senator LOTT. Thank you, Mr. Chairman.

Admiral Hancock, as you refer to in your statement, the ship overhaul and repair funding and force levels would be reduced substantially, supposedly in the next few years. I think that is a big mistake, but we are having to deal with it.

This will have an effect on both public and private yards. How does the Navy plan to deal with these cutbacks and still provide an adequate base for overhaul and repair and surge requirements?

Admiral HANCOCK. Well, we are in the process of looking at a downsizing of industrial overhead, in order to make our shipyards more efficient in accomplishing the workload.

As we draw down the size of the fleet and the size of the Navy, there is going to be an accompanying downturn in workload over the long-term. So the Naval Sea Systems Command has come up with a plan to downsize the shipyards, a pace, to try to maximize the retention of the required skills and the surge capability, while at the same time doing work more efficiently and hopefully at less cost.

Senator LOTT. Now you know and I know that when you reduce the size of employment at a shipyard from 10,000 or 12,000 down to 6,000, those people do not hang around waiting for a surge opportunity. They have to find other work. They go other places, and you do not build a shipyard up from 5,000 or 6,000 up to 12,000 without a lot of people that have to be trained or retrained. There is a lot of waste.

In the case of a nuclear submarine capability, the people working in the shipyards have unique abilities which you can lose. If we lose one shipyard and wind up with only one that can do the work, you have either lost that capability for good or you have lost it for a substantial period of time that it would take to get those people back on board and trained and up to speed to do the work.

I think we are headed for real trouble, and I am not sure the Navy has a serious plan to deal with it.

Admiral HANCOCK. Well, I agree with the thrust of your question, Senator, but I disagree with the bottom line. I think the Naval Sea Systems Command has spent a good deal of time examining the complex issue of how to downsize their industrial capacity without destroying their capability to do the required work, and the redundancy.

In the face of 25 percent force reduction, the size of the Navy going down by 25 percent, I feel compelled to do at least as well in reducing the infrastructure, because clearly over the next several years, the top line in the Department of Defense is going to be reduced.

And in order to accommodate the force levels that we would like to retain at the end of this downsizing, that supporting infrastructure, the school house, the maintenance facilities and the other supporting infrastructure is going to have to be reduced.

Right now, I do not see it coming down 25 percent.

Senator LOTT. Well, I hope you are right. You have a job to do, we tell you what you have to do, and you have got to make the best of it, and you are all putting the best possible face on it.

But I hope that you will also not fail to paint the true horror pictures that we are causing. Tell us the bad side of what we are doing too as we go forward. We may decide, well, it is tough, we got to do it, but I hope some of our military service personnel will come in and say, if you do this, if you force us to do this, this is what you are going to lose.

And I am not sure we are always getting that side of it.

Admiral HANCOCK. Well, clearly, there is a price to be paid. We will either pay it in force structure or in terms of improved efficiencies. And I believe the DMR process has been the result of the reality that we will have fewer resources for the Department of Defense.

To the extent that we can generate enthusiasm for more efficient operations and more cost effective businesses in our shipyards and NADEPS, I think we will preserve the vital force structure we need to keep in the Department of Defense.

Senator LOTT. General Arick, the Marine Corps depended heavily on their Corps maintenance and support activities during the Persian Gulf operations. Defense Management Reviews, DMR actions and personnel cuts will effect these support activities severely.

Do you have an estimate of the potential impacts to the readiness and sustainability of the Corps of these actions?

General ARICK. The readiness and sustainability of the Corps will stay at the level that people in the United States are used to. It will stay up high and improve.

Senator LOTT. You do not see any problems with some of these DMR actions and the cuts that you are being forced to deal with?

General ARICK. No, sir. I am not sure exactly where you are heading on that, sir. Are you talking about the supply depot consolidation?

Senator LOTT. That is just one example.

General ARICK. We see no problem in that right now. Right now, we are working on a memorandum of agreement with DLA, so that is still a question in our minds. We see no problem or impact with the depot maintenance consolidation, sir.

Senator LOTT. Now, Mrs. Leiby, throughout your statement, you praise the Army logistics and supply infrastructure and the contributions they made during Desert Shield/Desert Storm.

Under the DMR consolidation plans, a number of these activities will be eliminated, reduced, transferred or consolidated. What do you feel the impact will be on your services' ability to respond and support a Persian Gulf type operation in the future?

Mrs. LEIBY. We do not see any change in that ability. Insofar that we achieve the efficiencies that are in the Defense Management Review Report, we should have no impact on readiness at all.

If however, we do not achieve all of the efficiencies and so forth, then we will have to reassess the priorities within the Army to see how we can realign resources.

Senator LOTT. Let me tiptoe out there one more time to see if any of you would feel willing to be maybe a little critical of this.

I thought I picked up just a tad of some concerns in your testimony, General Finan. What is your reaction to some of these DMR reductions and consolidations? Are you not concerned about what it is going to do for you in a number of areas?

General FINAN. Sir, we are concerned to the extent, as Mrs. Leiby said that the savings do not materialize and yet they have been taken out of the budget and we have to live with the result.

To date, we have not run into any major problems that would tend to lead us to believe that we are not going to make the savings. We are concerned about the depot maintenance area, the consolidation of that, and our main concern there is that the bulk of our savings is predicated on competition, both inter-service and outside.

To the extent we have restrictive language or some other hinderance that prohibits us from allowing that competition and those savings are in jeopardy, then we start running into problems.

But other than that, we are cautiously optimistic that those saving goals are going to materialize if we proceed along the line we are heading.

Senator LOTT. Thank you, Mr. Chairman.

Senator DIXON. Thank you, Senator Lott.

Final question for each of you, Mr. Shycoff wants DBOF. The General Accounting Office and the House Armed Services Committee did not give him DBOF this year.

I have to ask each of the four of you: General Arick, Admiral Hancock, Mrs. Leiby and General Finan, are you for or against DBOF? I need it for the record.

General FINAN. Sir, the Air Force fully supports the DBOF concepts, and as Mr. Shycoff said, for us, in fiscal year 1992 we see relatively little impact on the way we will do business, because it is pretty much a name change.

As we get into the outyears, obviously, we want to fully play in the decisions on what is put into that fund and when it is put in and how it is put in and as long as we have that say, we feel we can work toward accomplishment of a more efficient Defense Department.

Senator DIXON. Mrs. Leiby?

Mrs. LEIBY. The Army is also very supportive of the DBOF conceptually. We particularly like the aspect of the capital budgeting, to maintain an up-to-date infrastructure within our business activities which has been difficult, as Mr. Shycoff mentioned, to compete against a helicopter or a tank.

As General Finan mentioned, we would like to participate as we get into fiscal years 1993 on out, on the business activities as they move into the fund, but we are very comfortable with where we are going in fiscal year 1992.

Senator DIXON. Admiral?

Admiral HANCOCK. I share the General's view as well as Mrs. Leiby's view that there is relatively little change. The Navy has a lot of experience with revolving accounts and operating industrial funds, and from what I understand of the rules in fiscal year 1992, it will be business as usual for the Navy.

And we are certainly supportive of any effort to achieve economies through productivity increases.

Senator DIXON. General Arick?

General ARICK. The Marine Corps is primarily a customer in the first stages of this DBOF effort and in that role, we look forward, anxiously, to the savings that we will hope to realize. The initial stages consolidated the revolving funds and again, like my colleagues have said, that will be business as usual.

We look forward to the opportunity to participate in the decision process as we consider adding functions to DBOF.

Senator DIXON. Well, you have done better with the witnesses today, Mr. Shycoff, than you did with GAO and the House. We congratulate you. We are adjourned.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR ALAN J. DIXON

DEFENSE BUSINESS OPERATIONS FUND

Senator DIXON. Mr. Shycoff, the Defense Technical Information Center and the Information Analysis Centers have been funded in the past through the Defense Logistics Agency.

Under the fiscal year 1992 budget proposals, will these activities be funded through the new Defense Business Operations Fund?

How will these activities be funded in fiscal year 1992, and how much is currently in the fiscal year 1992 budget for these activities?

How will the overhead activities for these functions be funded under the DBOF in fiscal year 1992?

Mr. SHYCOFF. Both the Defense Technical Information Center (DTIC) and the Information Analysis Centers (IACs) will be funded through the Defense Business Operations Fund (DBOF) in fiscal year 1992.

Like other business-type activities funded through the DBOF, our proposal is to fund DTIC and the IACs through reimbursements based on the level of support provided to customers. Our intent is to bill the services and the Director of Defense Research and Engineering's (DDR&Es) Research Development Testing and Evaluation (RDT&E) accounts. These accounts would bear DTIC and IACs costs based on the number of registered users having access to DTIC and IACs information. The services and DDR&E sponsor registered users such as contractors and DOD organizations that are performing research and development work which allows them to obtain DTIC and IACs products and services.

In fiscal year 1992 DTIG and IACs costs totaling $44.0 million are included in the DBOF. $9.6 million will be financed through existing reimbursable programs, and the remaining $34.4 million will be financed by the services' and DDR&Es' RDT&E accounts as described above. Funding is not presently included in the customer accounts.

Overhead activities for both DTIC and the IACs are included in the $44.0 million which is part of the DBOF.

REDUCING EXCESS INVENTORY

Senator DIXON. Mr. Shycoff, last year the fiscal year 1991 Defense Authorization Act included the direction to return the revenues from the sale of excess materials to the military service stock funds to help meet the cost of operating the services supply system.

Can you tell us how this new process is working?

Has DOD increased the rate of disposal of excess inventory in fiscal year 1991 compared to previous years?

What level of disposal are you forecasting for fiscal year 1992 and fiscal year 1993?

Mr. SHYCOFF. There have been implementation difficulties in fully complying with this guidance. Funds from the sale of excess materiel are being captured in the Defense Stock Fund. We are working on the details of a potential transfer.

Projected disposals have increased significantly in response to congressional direction. We speak of disposal in two senses, both of which have increased. There are the transfers from the supply system to the Defense Reutilization and Marketing Service (DRMS) and there are the disposals by DRMS by either selling or scrapping an item or reutilizations by other DOD, Federal, or State organizations. I have actual data for 1990 from the second type of action. It shows a 46 percent increase in 1990 DRMS disposals. The transfer of stock fund materiel items to DRMS was originally budgeted at a value of $1.6 billion but has now been updated to reflect an estimate of $3.9 billion in transfers to DRMS in fiscal year 1990.

The current projection of stock fund material transfers to DRMS for fiscal year 1991 is $4.7 billion. This compares to $1.5 billion in disposals projected for 1991 2 years ago and reflects our response to congressional direction and budget incentives. The transfers to DRMS are projected to approach $5.0 billion in fiscal year 1992 and $4.8 billion in fiscal year 1993. The Department is making a strong effort to reduce spare parts inventories that are no longer repairable or have been returned to the supply system when the weapon system they support is modified or replaced.

It is important to note that the inventories of disposal items are valued at the full standard price, as if the item were new, while in actuality the inventories normally consist of old and previously used items. If the Department can reuse an item, it does, and the standard price is accurate. However, when the item is sold, we tend to realize only 2 to 3 percent of the inventory value expressed at standard price.

NATIONAL BOARD FOR THE PROMOTION OF RIFLE PRACTICE

Senator DIXON. Mrs. Lieby, last year the fiscal year 1991 Defense Authorization Act included a provision that required the Director of Civilian Marksmanship Program under the National Board for the Promotion of Rifle Practice to become financially self-supporting beginning in fiscal year 1993. The fiscal year 1993 budget requests $5 million for the Army to continue supporting the Director of Civilian Marksmanship Program in fiscal year 1993. Does the Army want to eliminate the current requirement in law for this program to become self-supporting beginning in fiscal year 1993?

Ms. LIEBY. The Director of Civilian Marksmanship Program, under the terms of public Law 101-510 (authored in the HASC), will receive no further congressional appropriation support beginning on October 1, 1992 (Fiscal year 1993), under congressional direction that it become fully self-supporting. The inclusion of the fiscal year 1993 budget request for the Civilian Marksmanship Program reflects the fact that the self-supporting provisions in Public Law 101-510 are not executable.

To summarize Title 10, USC, the Secretary of the Army shall provide for the instruction of able-bodied citizens of the United States in marksmanship and the promotion of practice in the use of rifled arms, the management of competitions in the use of arms, and the issue of the arms, ammunition, targets, and other supplies necessary for those purposes.

Further, an annual competition called the "National Matches" and consisting of rifle and pistol matches for a national trophy shall be held, as well as a small-arms firing school in connection with the National Matches.

The Civilian Marksmanship Program has the added responsibility to sell World War II surplus M-1 Garand rifles to citizens 18 and older, and annually returns to the U.S. Treasury, $1 million, thereby reducing inventory warehousing costs, and eliminating alternative costs associated with firearm demilitarization.

The Secretary of the Army conducts this historic program under the provisions of Title 10, USC, sections 4307-4313, 4652, and Title 32, USC, section 316. In view of Pub. Law 101-510, the Army has conducted a financial accounting and management analysis of its ability to operate a professional civilian marksmanship program without the use of limited amounts of appropriated funds.

After careful review, the Army has concluded that the self-sufficiency legislation will have a severe impact, and preclude the Army from continuing the Civilian Marksmanship Program.

INCREMENTAL COSTS OF PERSIAN GULF CONFLICT

Senator DIXON. Can each of you give us some estimate of what incremental costs from the Persian Gulf conflict you will have in fiscal year 1992?

Ms. LEIBY. The Army Operation and Maintenance requirement for fiscal year 1992 is currently forecast at $3.0 billion, primarily in the areas of equipment maintenance, transportation, and continuing operations.

Admiral HANCOCK. Fiscal year 1992 incremental costs will depend on the phasing of the continued drawdown in the Persian Gulf. Operation and maintenance types of expenses will include transportation of personnel and equipment that remains in theater after the end of the current fiscal year, bills for CHAMPUS services provided during fiscal year 1991 but filed subsequently, deactivation of sealift assets retained in theater throughout fiscal year 1991, and some maintenance that is attributable to Operations Desert Shield/Desert Storm, but that cannot be executed in fiscal year 1991.

General **Finan**. DOD Comptroller is currently consolidating service fiscal year 1992 requirements for incremental costs from the Persian Gulf conflict for submission to Congress.

General **Arick**. The Marine Corps has requested $178.3 million for Operations Desert Shield/Desert Storm funding in fiscal year 1992. Of this amount $13.3 million is required in Military Personnel to fund Reserve Component Activation and Stop Loss carryover. The remaining $165 million is O&M,MC, of which $50 million is for Depot Maintenance, $105 million for reconstitution of the Maritime Prepositioned Ships, and $10 million for CONUS support.

AVIATION AMENDMENT

Senator **Dixon**. Admiral Hancock, I understand that the Navy's recent aviation amendment to the fiscal year 1992 budget transfers $223 million in ship and aircraft depot maintenance funding from fiscal year 1993 to fiscal year 1992.

The reason given for this transfer is "increased optempo in fiscal year 1991", which I assume means the Persian Gulf conflict.

Aren't these increased optempo costs in fiscal year 1992 incremental costs of Operation Desert Shield and Desert Storm? Why aren't these costs being paid from foreign contributions in the Defense Cooperation Account?

Won't this transfer make the Navy's already serious depot maintenance shortfall in fiscal year 1993 even worse?

Admiral **Hancock**. The increased fiscal year 1992 incremental depot maintenance costs are the results of accelerated wear and tear due to the heightened state of readiness, harsh environmental operating conditions and repairs required upon return stateside due to Operations Desert Shield/Desert Storm. As part of the Second Notification the Department of the Navy is requesting Defense Cooperation account funds via the Office of the Secretary of Defense, Comptroller (OSD(C)) for fiscal year 1992 Operations Desert Shield/Desert Storm incurred costs. The aviation amendment was formulated surrounding known fiscal year 1992 depot maintenance incurred requirements due to Operations Desert Shield/Desert Storm and unknown fiscal year 1992 funding sources.

Operations Desert Shield/Desert Storm contributed to existing depot maintenance requirements in fiscal year 1992, further exacerbating the fiscal year 1992 shortfall that would need to be funded in fiscal year 1993. The Department chose to fix the near-term program with the aviation amendment. As part of routine budget reviews the Department will be reassessing the fiscal year 1993 depot maintenance program.

Questions Submitted by Senator Carl Levin

INVENTORY MANAGEMENT

Senator **Levin**. Mr. Shycoff, the justification material for the Defense Business Operations Fund includes the unit cost for receiving and issuing inventory items in each service.

According to these figures, the unit costs of receiving and issuing material are very different in each service:

Army — $35.00 per receipt/issue.
Navy — $30.32 per receipt/issue.
Air Force — $23.29 per receipt/issue.
Defense Logistics Agency — $17.39 per receipt/issue.

Why is there such a wide difference in the unit cost of receiving and issuing an inventory item in each service?

Would each of the services comment on these figures? Why, for example, is the cost per issue for Army twice the cost per issue for DLA,

Mr. **Shycoff**. The estimates included in the Fund Overview book are preliminary, based on the best information available at the time. The estimates represent multiple workload functions performed by the DOD components in support of supply operations. The scope of supply depot operations varies significantly among the components. Continuing review of these estimates indicates that while the data included in each is accurate, the figures are not parallel because a standard computation method was not used by each component. My staff is working with the components to define a standard computation method to ensure that the costs are parallel. As we review the varied functions and identify efficiencies in operations, improvements will continue to be recommended for incorporation and adoption by the components. The services concur with the above response.

REDUCING EXCESS INVENTORY

Senator **Levin**. Mr. Shycoff, last year the fiscal year 1991 Defense Authorization Act included a provision designed to reduce levels of unnecessary inventory in DOD.

This provision limited obligation for new purchases in the stock funds to 80 percent of the sales of material from the stock funds. There were certain exceptions to this 80 percent cap, and the Secretary of Defense was given authority to waive this provision if necessary.

What has been the impact of this provision on inventory stock in fiscal year 1991?

Has OSD used similar caps on sales as a percent of obligations to reduce inventory levels?

Would each service witness comment on the effect of this 80 percent limitation during fiscal year 1991?

Mr. **Shycoff**. The Department is reducing its inventory and this provision produces less inventory. This provision is too broadly written and it was a cause of some inefficiency in preparing for the operation in the Persian Gulf region. The Secretary of Defense exercised his authority to waive the provision for certain categories of obligations that should have been excluded from the start. The law currently limits all stock fund obligations, excluding fuel and subsistence, to 80 percent of sales. It should have also excluded obligations for the repair of depot level repairables, retail operations, commissary supplies other than subsistence, and the supply operations function (primarily the pay of people) now in the stock fund.

OSD has used ratios of obligations to sales and is increasing this practice as part of the unit cost initiative. The 80 percent limitation is a lower percentage than the Department has used in formulating the budget. This imitation presumes that inventory is available to satisfy the operating needs of the customers who order things from the supply system. If that presumption is not true, there will be shortages in the supply system which reduces the readiness of the operating forces. The Department requires the flexibility to react to these shortages to maintain readiness. I believe the Department will manage its inventories and respond to changing events without the rigidity of a percentage imposed in law by Congress.

Ms. **Leiby**. Had we operated the full year in fiscal year 1991 with the 80 percent limitation, it would have been a disaster in sustaining the readiness of the Army. We didn't do this due to Operations Desert Shield/Desert Storm (ODS). ODS made it absolutely critical to deviate from the 80 percent guidance, as an 80 percent limitation is too restrictive, even in peacetime. During ODS we operated under the policy of 100 percent buy back of ODS sales and 80 percent of non-ODS sales. Although we are trying to operate within the 80 percent limitation since the war, it is a tight constraint. Our continuing involvement in Southwest Asia has caused problems with the limitation, especially in the automotive and aviation commodities.

Admiral **Hancock**. The Department concurs with concerns over inventory levels in service stock funds and the necessity to reduce these levels. In support of the Defense Management Report and previous congressional direction, the Department has implemented both policy and procedural changes to reduce inventory levels. The current budget request had been adjusted in recognition of the savings from these actions. The Department realized significant inventory reductions during fiscal year 1990 and is continuing its aggressive actions to reduce these inventories. However, the 80 percent limitation does not provide sufficient flexibility to permit the stock funds to reduce inventory levels and provide requisite spare parts support for operating forces. In fiscal year 1991 exemptions to this policy were enacted for the component repair program and the procurement of retail inventory because of their relatively short lead time. Therefore, they have experienced no impact from the limitation. The wholesale procurement accounts for both ship and aviation support have been budgeted within the 80 percent limitation. Due to an average lead-time of approximately 2 years for wholesale procurements, the actual material support impact to readiness from the limitation will not be evident until fiscal year 1993.

Without specific exclusion for short lead-time material, imposition of the 80 percent obligation limitation seriously limits the Department's ability to maintain appropriate stocks to meet near-term customer demands. This situation would have an early negative impact on readiness if depot level repairables are not cycled through the repair process or if high turnover items cannot be purchased.

General **Finan**. The first quarter of fiscal year 1991 found the Air Force Stock Fund (AFSF) acutely constrained because the limitation restricted inventory replenishment of those divisions that have high inventory turnover rates and low inventory levels; such as the Medical-Dental Division and the Air Force Academy Cadet Division. Additionally, the AFSF has two new divisions in fiscal year 1991 the Cost of Operations Division (COD) and the Repairable Support Division (RSD). Neither division has sales in fiscal year 1991 but they do have obligations. This dilemma found the AFSF reprogramming obligations originally planned for two divisions now spread to four divisions. The restraint was so severe that the AFSF mission potentially could have been compromised. At the end of January 1991, the Deputy Secretary of Defense opted to invoke section 311 of the National Defense Authorization Act for Fiscal Year 1991. This action brought relief to the AFSF; however, the Systems Support Division (SSD), the remaining division encumbered by the limitation, has not fully recovered from the first quarter perturbations caused by this limitation and probably will not fully execute the reduced (80 percent) fiscal year 1991 program. SSD orders long lead-time items. The delay in procuring these items will impact readiness in future fiscal years.

REDUCING EXCESS INVENTORY

Senator LEVIN. Mr. Shycoff, have you made any progress during the past year in reducing the level of unrequired or inapplicable inventory in DOD?

How much of this reduction was actually the result of disposing of the unneeded items and how much was the result of changing the way you price unrequired inventory?

Mr. SHYCOFF. Yes DOD is making progress through the Inventory Reduction Plan. Comparing the September 1989 and September 1990 Supply System Secondary Item Inventory Reports shows a reduction in total inventory from $109.5 billion to $101.9 billion. The inapplicable inventory within that total decreased from $34.3 billion to $29.3 billion. The portion of the inapplicable that is classified as potential Excess decreased from $10.1 billion to $8.1 billion. These numbers are at a cost price and greatly overstate the market value. I would submit that the great majority of this inventory has been used at least once, has been returned to the supply system, and is being retained for possible reuse. These numbers are not adjusted for the normal inflation (that is, they are not in constant dollars), so the reductions are greater than shown by comparing the 1990 numbers to those for 1989.

The inapplicable reductions also result from inventory reclassification with new demand experience. While Operation Desert Shield's impact would only be reflected for the last 2 months of the reporting period, preparation for a war would make some of the retention inventory directly applicable. It would also cause materiel in inventory to be used. The reporting of this data would lag the actual event, and I cannot trace it directly, but there is some of the war's impact here.

As discussed earlier, transfers to disposal increased last year to $3.9 billion. This represents an increase in response to congressional direction.

Pricing reductions estimated at approximately 7 percent are reflected in the Supply System Inventory Report. These pricing reductions reflect an adjustment for the cost to repair used inventory and a partial market value adjustment. DOD has not fully implemented the GAO accounting guidance to value inventory at the lower of cost or market value. We are moving toward implementing that guidance and are in the process of obtaining the approval of the Federal Accounting Standards Advisory Board. Implementing GAO guidance will reduce the reported inventory value significantly.

Senator LEVIN. Mr. Shycoff, please provide for the record a table summarizing purchases of supplies and materials from the stock funds for fiscal years 1990–1993 from each O&M account.

Mr. SHYCOFF. Operation and Maintenance is the largest customer of the stock funds. The stock funds issue materiel and charge all appropriations, not just O&M. We do not aggregate the actual customer procurements by stock fund and appropriation in summary, but there are budget tables used to derive the information for O&M.

As part of several Defense Management Review initiatives, we are moving the full cost of operating the supply system into the cost of the goods that the supply system sells. We are financing operations that used to be appropriated separately through the price and surcharges that customers pay when they purchase supplies and materiel from the stock funds. These changes are being phased in beginning in fiscal year 1990 and they will distort the comparisons the table below provides. In brief, they include:

Financing roughly $3 billion in operating costs for inventory control points and supply depots;

Selling Depot Level Repairables in the Army and Air Force rather than issuing them without charge; and

Financing military personnel costs of the supply system, second destination and over ocean transportation costs centralized supply operations costs, and capital budgeting costs for supply operations.

All of these increase the cost of supply items to the O&M appropriations. We strongly believe they lower the total cost to DOD by establishing customer relationships and incentives to reduce total cost. The budget reflects significant savings from these initiatives.

The price of fuel is a further distortion as the composite price per barrel, reacting to market forces, was $23.56 in 1990 with a large increase to $44.10 in 1991, and decreases to $29.40 per barrel in 1992 and $30.24 per barrel in 1993.

The requested information, reflecting O&M purchases from stock funds, including fuel, follows in millions of dollars:

	Fiscal year 1990	Fiscal year 1991	Fiscal year 1992	Fiscal year 1993
O&M				
Army	2,806.1	2,624.1	3,738.8	3,869.1
Navy	3,976.8	5,359.9	4,615.4	4,569.7
Marine Corps	295.9	367.5	387.6	333.3
Air Force	3,477.6	4,617.7	3,964.3	4,450.0
Defense Agencies	153.7	249.7	476.6	560.0
Reserves/Natl. Guard	1,559.4	2,180.6	1,886.2	2,419.9
Total	12,269.5	15,399.5	15,068.9	16,202.0

INVENTORY MANAGEMENT

Senator Levin. Ms. Leiby, why for example, is the cost per issue for the Army twice the cost per issue for DLA?

Ms. Leiby. There are several reasons why the Army's unit cost is greater than DLA's. First, the Army counts a number of expenses in unit cost that DLA excludes. For example, the Army includes the expense associated with Real Property Maintenance Activities and the cost of Preservation, Packing, and Packaging; quality assurance inspections; military pay; second destination transportation; and special inventories in unit cost computations while DLA does not. In addition, as "owner" of the base, the Army must include base operation expenses in unit cost. DLA, as a tenant in most instances, receives many base operations services free of charge resulting in lower unit cost rates. Finally, the Army's workload mix is more complex than DLAs. True unit cost rates vary dramatically at individual Army depots based on different types of supplies being processed. This situation is further compounded because the Army does a large business in field return receipts whereas almost all DLAs receipts are new procurements direct from the vendor. Field returns are simply more time consuming and difficult to process than new procurement receipts. Therefore, when all Army depots are taken into consideration with all the averages to process some 200 different categories of both serviceable and unserviceable secondary items, the Army's average is $35.00 per receipt/issue.

UNIT COST GOAL

Senator Levin. Why is there such a wide difference in the unit cost of receiving and issuing an inventory item in each service?

Admiral Hancock. The principal reason for the cost differentiation between the services and DLA is that each unit cost goal contains a different mix of costs. The services' supply depot costs include other functions in addition to the pure physical distribution function upon which DLA's unit cost is based. The cost of operating Navy supply centers includes costs of other functions such as customer and technical services, contracting, fuel management, repairables interface, local delivery, material requirements determination, material screening, and operation of SERVMARTS (self-service stores for high usage material). When the cost of these functions (not performed by DLA) are removed, Navy's cost to perform similar workload are equal to or lower than DLA's costs.

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

DEFENSE BUSINESS OPERATIONS FUND

Senator THURMOND. Mr. Shycoff, earlier this month, in his testimony before the Armed Services Committee, the Comptroller General stated "that most of the savings estimates identified in the DMR had been based primarily on management judgments and were not supported by historical facts or empirical data." He also indicated that the Department of Defense has indicated that about $3.3 billion in original anticipated savings will not be achieved because of various program changes. How do you respond to his concern and what actions will you take to make up the $3.3 billion shortfall?

Mr. SHYCOFF. I recognize that there is some uncertainty in the numbers. For many of the actions there are no historical facts or empirical data. We have relied heavily on the judgments and experience of our senior managers for some of the estimates. Recognizing the uncertainty, we have tried to be conservative in our estimates. For example, although the Navy has experienced savings of approximately 25 percent by stock funding repairables, we have projected savings of only 10 percent for incorporation of this policy in the Army and Air Force.

We are constantly reviewing and updating the estimates as we get some real experience. With the benefit of another year, as indicated by the question, the overall estimate from those actions identified a year ago has gone down by $3.3 billion. As we put the fiscal years 1992-1993 budget together, we took these revised estimates into account as the Department realigned the 1992-1997 programs to reflect all of the fiscal realities, not just the $3.3 billion. As you know, we have been forced to make significant force level reductions. Because there have been additional management actions identified that should save an additional $13 billion, the Department was able to accommodate the $3.3 revision without requiring even further force level reductions.

BACKLOG IN DEPOT MAINTENANCE

Senator THURMOND. Mr. Shycoff, each of the services reports an increasing backlog in unfunded maintenance. Does the OSD Comptroller's office have an estimate of the total unfunded maintenance backlog and is there any concern at your level regarding the impact on readiness this backlog may have?

Mr. SHYCOFF. The total unfunded depot maintenance backlog for fiscal year 1992 is estimated at $1,110.5 million. This level of backlog is relatively stable for each of the services except the Navy. While the Army and Air Force unfunded maintenance backlogs are actually reduced from fiscal year 1991 through fiscal year 1992, the Navy's backlog doubles during this period. Specifically, there is an increase in the numbers of aircraft and engines overdue for maintenance, particularly in the Navy's Aircraft Rework and Maintenance program. The backlog for Navy aircraft repair increases from $129 million in fiscal year 1991 to $320.2 million in fiscal year 1992. This increase is a result of the decreased funding and carry-over of unfunded backlog from previous years. While the number of engines in need of repair will increase, the pool of engines in the pipeline is adequate to meet operational needs. Also, the backlog of airframes will not affect readiness of the deployed forces, but will require careful management of airframes assigned to land based forces. Although it would be preferable to eliminate these backlogs to attain higher levels of readiness, some risks must be taken to balance competing program requirements in a constrained fiscal environment.

RESOURCE FLEXIBILITY

Senator THURMOND. Ms. Leiby, I notice that both in your prepared statement and those of your compatriots you plead for flexibility in resource allocation. Would you give us some examples which inhibit your flexibility in managing the resources?

Mrs. LEIBY. The Army budget request is built upon the best information available in order to maximize the benefits of the resources allocated to us. During the year of execution, we often have to realign resources to meet changing fiscal and mission realities: foreign currency fluctuation, absorption of civilian pay raises, unexpected storm damage, or Operations Just Cause or Desert Shield/Storm.

Our ability to react quickly to these real world conditions without serious disruption to our readiness posture is directly related to our flexibility to realign resources. Every time that Congress inserts language or enacts a law that creates a fence around a program, a minimum level of funding for a type of program, a notification period before we can execute a program, or any other fiscal or policy constraint, we lose critical flexibility.

In the area of civilian personnel management, we receive much congressional guidance. We are told not to manage by end strength, but rather to balance workload and resources. However, previous congressional marks have directed a 25 percent reduction to foreign national pay, a 20 percent reduction to management headquarters over 5 years, exemptions for medical and depot maintenance personnel from planned civilian personnel reductions, and now a new requirement to reduce contractor personnel proportional to other civilian personnel—all of which are impediments to balancing workload and resources.

As the Army implements plans for reshaping the force, increased financial flexibility is essential to ensure we have sufficient resources to meet our highest priorities. Restrictive language inhibits flexibility and limits options for both the commander and the financial manager. We seek the committee's support in providing the services as much flexibility as possible.

AIRCRAFT MAINTENANCE

Senator **Thurmond**. Admiral, Chart 4 of your prepared statement reflects that the aircraft overdue for maintenance climbs from 269 in fiscal year 1992 to 500 in fiscal year 1994. What is the contributing factor to this dramatic increase?

Admiral **Hancock**. The backlog of aircraft overdue for depot-level maintenance is solely due to affordability considerations.

It is however, important for the committee to understand that the projections are highly dependent upon a large number of independent variables matching expectations. When this does not happen, the actual backlog can vary widely from the projection. Given the magnitude of the Desert Shield/Storm operation and past experience with the backlog projections, the Navy expects that the actual backlog will vary considerably from the budget projection.

SHIPYARD MODERNIZATION

Senator **Thurmond**. Admiral Hancock, I understand that when the Navy's O&M,N budget request was prepared, the Department did not take into consideration that the Charleston Naval shipyard will begin overhaul work on the 688 class attack submarines. I am told that the shipyard will require approximately $2.5 million in fiscal year 1992 and $4.5 million in fiscal year 1993 to ensure it can begin the overhaul work in fiscal year 1993. I have also been advised that the Department will reprogram money to fund this obligation. What are the Navy's plans for funding this requirement?

Admiral **Hancock**. Charleston Naval Shipyard will begin overhaul work on 688 class submarines in late fiscal year 1994 (vice fiscal year 1993). The shipyard will require approximately $2.5 million in fiscal year 1992 and $6.5 million (vice $4.5 million) in fiscal year 1993 to purchase the necessary equipment. While this requirement was not included in the President's budget request, the capital purchases equipment budget can be reprioritized to ensure Charleston Naval Ship Yard can perform the 688 class overhaul workload.

Senator **Thurmond**. General Arick, I can understand that limiting the number of field exercises in fiscal year 1991 may not have an impact on the corps readiness because of the Persian Gulf experience. However, what impact would the continuing reduction in field exercises have on your readiness?

General **Arick**. The Marine Corps uses field training exercises, as well as various other forms of training such as Command Post Exercises, Tactical Exercises Without Troops, simulations, Professional Military Education and so on, to maintain a constant high degree of readiness. The result of this commitment to training was evident in the success that the Marine Corps had in the Desert Shield/Desert Storm operation. Continuing reductions in field exercises will have a detrimental effect on the corps' overall readiness posture. If such reductions were to occur, greater emphasis would need to be given to alternative, less productive forms of training.

Senator **Thurmond**. General Arick, in theory the Desert Storm Supplemental Appropriations should offset all the expenses of the operation. My concern is that the wear and tear on your equipment will not show up until sometime later in the fiscal year. My first question is does the Supplemental Appropriations provide sufficient funding to cover your Desert Storm repair work. Second, is there enough leeway in the fiscal year 1992 O&M funding to support the increased wear and tear from Desert Storm?

General **Arick**. The fiscal year 1991 Supplemental Appropriation ($12.7 million) covers the fiscal year 1991 executable equipment repairs. An additional $50 million has been requested in fiscal year 1992. If the current estimate of the equipment condition is accurate, the $50 million should offset the fiscal year 1992 incremental repair costs from the Persian Gulf conflict.

WARTIME HOST NATION SUPPORT

Senator **Thurmond**. General Finan, the wartime contingency agreement in which German reservists will provide certain services to the U.S. bases in Germany will cost the United States $3.7 million in fiscal year 1992 and $6.5 million in fiscal year 1993. What is the reason behind the significant increase over the 2 years?

General **Finan**. This increase in the Wartime Host Nation support (WHNS) program between fiscal year 1992 and fiscal year 1993 is for the purchase of an additional increment of supplies and equipment the U.S. Air Force is obligated to buy to fully outfit the WHNS units assigned to support the U.S. Air Force/NATO.

The $3.7 million funding in fiscal year 1992 is the same as what we are funding in fiscal year 1991, and is necessary for must-pay bills for storage rental to protect and maintain the equipage bought in prior years. There is no funding "growth" in the WHNS program in fiscal year 1992 as the HASC and HAC marks would suggest.

Senator **Thurmond**. General Finan, you indicated that the Real Property Maintenance funding for the Air Force declines 37 percent in fiscal year 1992. Could you put this decline in a better perspective by giving us examples of the type of maintenance you will be deferring because of the shortage of funds?

General **Finan**. Essentially all funding for Real Property Maintenance by Contract (RPMC) was reduced to near zero levels leaving only funding to satisfy emergency contract facility repairs beyond in-house capabilities. The remaining RPM resources are largely devoted to must-pay recurring facility maintenance to include civilian pay, supplies and equipment and base maintenance contracts. Essential facility maintenance and repair requirements to preserve the life of facilities (such as large facility repair projects for roofs, electrical infrastructure, and airfield maintenance) will be deferred. This will increase the backlog of maintenance and repair and if allowed to continue more than a year or two will result in unreliable utility systems, deteriorated airfield pavements, neglected facilities and reduced services provided through base maintenance contracts. This reduction will also profoundly hamper our ability to provide facility modifications to meet changing mission needs.

[Whereupon, at 3:53 p.m., the hearing was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

THURSDAY, MAY 16, 1991

U.S. Senate,
Subcommittee on Readiness,
Sustainability and Support,
Committee on Armed Services,
Washington, DC.

DOD FACILITY MANAGEMENT AND MILITARY CONSTRUCTION

The subcommittee met, pursuant to notice, at 2:29 p.m., in room SR-222, Russell Senate Office Building, Senator Alan J. Dixon (chairman of the subcommittee) presiding.

Committee members present: Senators Dixon, Thurmond, Lott, and Coats.

Committee staff member present: Arnold L. Punaro, staff director.

Professional staff members present: Robert E. Bayer, and David S. Lyles.

Minority staff members present: Patrick A. Tucker, minority staff director and counsel; Judith A. Freedman, George K. Johnson, Jr., and Ronald P. Kelly, professional staff members.

Staff assistant present: Mary J. Kampo.

Committee members' assistants present: Charles C. Smith, assistant to Senator Dixon; Terence M. Lynch, assistant to Senator Shelby; Samuel D. Adcock, assistant to Senator Lott; Eric H. Thoemmes, assistant to Senator Coats; Thomas L. Lankford, assistant to Senator Smith.

OPENING STATEMENT OF SENATOR ALAN J. DIXON, CHAIRMAN

Senator Dixon. Ladies and gentlemen, the subcommittee will come to order. Today marks the fifth hearing this year of the Subcommittee on Readiness, Sustainability and Support. Yesterday we heard testimony regarding the operations and maintenance portion of the administration's budget request for fiscal years 1992 and 1993. Today we will discuss a related portion of the budget which addresses facility capitalization and maintenance.

The Defense Department's facility management program has probably never faced more severe strains. We are in a period of uncertainty regarding the shape of our long term base structure as the Department gradually implements the closures directed by the

1988 Base Realignment and Closure Commission and reduces its presence overseas. At the same time the 1991 Defense Base Closure and Realignment Commission is analyzing Secretary Cheney's proposals for further reductions and consolidations in the United States.

Funding for facility capitalization and maintenance bears unprecedented reductions resulting in a virtual halt in construction for fiscal year 1993. Recognizing that the facility account never really got well during the years of robust defense funding in the early 1980s, this account now faces funding levels that clearly will not meet prudent replacement levels and will undoubtedly result in steeply increasing backlogs of repair and maintenance. Even construction which has been approved in recent years by the Congress is being held up by a succession of evermore complex approval mechanisms within the Department. Further complicating this situation are proposed accounting changes which tend to confuse the overall funding levels and whose results on future facility improvements are at best unknown.

Finally, after a number of years of attempting to provide a variety of capitalization options, including public-private ventures, we appear to be at a stalemate in using these authorities because of disagreements over accounting procedures. Frankly, all of these developments make me skeptical of the dedication of the Defense Department to providing efficient and safe facilities for military and civilian personnel and their families.

Despite rhetoric to the contrary, it appears that the DOD facility inventory is getting older, increasingly inefficient and dysfunctional. In the face of these problems I am pleased to welcome our witnesses today, colleagues in the task of modernizing the Department's facility stock. We look forward to hearing the testimony of the Honorable Colin R. McMillan, Assistant Secretary of Defense for Production and Logistics, the Honorable Susan M. Livingstone, Assistant Secretary of the Army for Installations, Logistics and Environment, the Honorable Jacqueline E. Schafer, Assistant Secretary of the Navy for Installations and Environment, and Mr. James F. Boatright, Deputy Assistant Secretary of the Air Force for Installations.

Ladies and gentlemen, as usual, your prepared statements will be placed in the record in their entirety. Mr. McMillan, I would ask that you limit your opening remarks to 10 minutes, and that your colleagues limit themselves to 5 to 8 minutes. Should there be a need for a closed portion of the hearing to address classified information we will plan to do that at the end of this session. I would ask each witness to advise us if there are classified responses associated with any of our questions.

I would now like to recognize the distinguished Senator from Indiana, Senator Coats, for any opening remarks he may have.

Senator COATS. Thank you, Mr. Chairman. I do not have anything of significance here on the opening statement. I do have a number of questions that I would like to ask our panelists relative to the base closing procedure. I think we all recognize that if we are going to ask the Department of Defense to be efficient with the taxpayers' dollars and to effectively manage a very large organization, clearly we have to give them a lot of latitude in terms of what facilities they need, what facilities will best serve the functions of the Department of Defense in the future.

For that reason I have, unlike many, indicated that unless the recommendations of the Base Closure Commission are proven to have not followed the criteria established by Congress, unless they were not conducted in an objective manner, and only if it is determined that decisions were made on a political basis, I would go ahead and support the recommendations of the Commission, even though my State of Indiana is one of the hardest hit States in the Union, even though I was deeply disappointed over the decisions that involved closing of bases in Indiana and loss of a significant number of personnel.

I think it is very important that those communities and those people representing those facilities have every opportunity to plead their case, to appeal their case, to make their case before the Base Closing Commission, and I am pleased that the Commission will hold one of its regional hearings in Indianapolis to allow us the opportunity to do that. But I do not think it is responsible for us to, on the one hand, severely reduce the amount of appropriations available to the Department of Defense, mandate that there be more efficient use of the taxpayers' dollars, and at the same time say that they cannot close anything in my State. So as painfully difficult as it is, I have indicated publicly and continue to indicate publicly that I will support the base closing unless it fails in those criteria that I outlined.

Also, I want to make sure that as we authorize the 1992 DOD legislation that we do not use that legislation to make political judgments to circumvent the Base Closing Commission recommendations or to micromanage decisions that are made within the various departments that make up the Department of Defense. If that is the case, and there may be some indications that that might be the case, then I think the whole process becomes unraveled. I do not think it is fair to ask those of us who have swallowed very hard and accepted the decisions of the Base Closing Commission to then turn around and say well, we are going to let some member or other, or some committee or other, make a decision that goes against the recommendations of the Department of Defense or appears to be advocating a political solution. I think these issues ought to be decided on their merits, and I would trust that those of us on the committee can support that.

I thank the Chairman for his hard work and diligent efforts in making sure that the base closing procedure is a proper one and that all considerations are evaluated very, very carefully. I look forward to the testimony of the witnesses. Thank you, Mr. Chairman.

Senator DIXON. I thank the distinguished Senator from Indiana.

At this time I will insert into the record a prepared statement by Senator Thurmond.

[The prepared statement of Senator Thurmond follows:]

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you Mr. Chairman. I join you in welcoming our distinguished panel to today's hearing on the fiscal years 1992-1993 military construction funding request.

I expect that military construction will be closely scrutinized over the next several years as we draw down our force structure and close excess military bases.

Mr. Chairman, last year I was disappointed when the Secretary of Defense placed a moratorium on domestic military construction from January 1990 to April 1991. This moratorium, despite waivers for critical projects, caused considerable disruption to the planning and execution of the installation commander's construction programs. In some instances, the cost of the project increased because of the delay.

It is my understanding that the Department is again requesting a moratorium on military construction for fiscal year 1993 and I hope the subcommittee carefully considers this proposal. We do not want to give the impression that military construction is unimportant and that we can delay facilities which are vital to the morale and efficiency of our military personnel.

Mr. Chairman, the House Armed Services Committee in its recent markup of the military construction request, virtually deferred all military construction in Europe. Although there will be significant changes in the number of forces stationed in Europe, I do not want to jeopardize the welfare of our personnel and their families by denying them needed renovation and construction. We have a responsibility to these men and women and I hope this subcommittee will provide the necessary military construction funding to support their needs.

Finally, Mr. Chairman I believe the decay of our base infrastructure will continue unless both the Defense Department and Congress make the difficult budget decisions to fully fund its repair or replacement. The longer we delay the funding for this critical area the higher the cost of repair will be when it finally falls apart.

Thank you Mr. Chairman.

Senator DIXON. Mr. McMillan.

STATEMENT OF HON. COLIN R. McMILLAN, ASSISTANT SECRETARY OF DEFENSE, PRODUCTION AND LOGISTICS

Mr. MCMILLAN. Mr. Chairman, thank you very much for giving us the opportunity to be with you today. As I go through my statement, I intend to answer some of the specific questions that you may have and, any individual questions that either you or Senator Coats have, we would be prepared to answer. Today we want to discuss defense facilities. I will concentrate on our fiscal years 1992 and 1993 facility investment programs, our base structure for now and the future, and the general provisions that we believe will help us manage our facilities better.

I want to emphasize that military strength is more than the number of troops or the amount of weapons. It depends on many ingredients. A defense infrastructure that fully supports our forces is one of the most important. We need to invest in defense facilities for two basic reasons; so that our military and civilian people have working and living places that they need in order to do their best work and so that we will be able to get and keep the people we need. Secretary Cheney said, "Our greatest strength is our men and women in uniform. Their quality is our most fiercesome weapon." Having the military facilities our people need is vital for them to do their best work. We are committed to facility investment that builds on this strength. I want to thank the committee for its continuing support for defense facility investment.

However, as the defense budget declines, we must recognize that we will not be able to fund that commitment at the level we would like. The Department's funding targets established at last fall's budget summit limit our Milcon for both fiscal years 1992 and 1993. For military construction appropriations, we are asking for $8.1 billion for fiscal year 1992 and $7.3 billion for fiscal year 1993. For O&M funded real property maintenance, we are asking for $3.8 billion in fiscal year 1992 and $2.5 billion in fiscal year 1993. I would hasten to point out that for fiscal year 1993, we are asking that $1.8 billion for major repairs and minor construction be included in the military construction appropriations rather than O&M. I will describe the reasons for that proposed transfer shortly.

The fiscal years 1992 and 1993 Milcon request will fund only the minimum construction needed to field new weapons systems, accomplish new or changing missions, and provide for the most pressing replacements of existing facilities. Details of each project will be provided to Congress as part of the budget justification material, so I am not going to go into them now. The Department supports the President's Budget for Military Construction and opposes any attempt by the Congress to add projects.

The lower level of Milcon budget for fiscal year 1993 is viewed by some as a "pause." It is due primarily to the limited resources available to the Department. The Department simply cannot afford to fully fund all of its priority programs. While facility investment remains very important, lowering its funding level was judged to be one of the least disruptive alternatives.

For fiscal year 1993, we are requesting that $1.8 billion for major repairs and minor construction be funded through the military construction appropriations. Now, repairs projects costing over $15,000 and minor construction projects costing less than $200,000 are funded primarily with O&M appropriations. We propose that all facility investment be funded with the same appropriations. We treat minor repairs and recurring maintenance as expenses rather than investments, and will continue to fund these expenses with O&M and R&D appropriations.

I would like to talk now about base closures. The Department is balancing its base structure with the force structure programmed for the 1990s. Our base structure planning reflects both the current budget realities and the changed threat to global security. We plan to substantially reduce the size of our force, and, therefore, we must reduce the number of bases. Senator Coats, I appreciate your comments on that point.

National security mandates that we get the most defense capability that we can from increasingly scarce resources. We have made significant progress in implementing the recommendations of the 1988 Base Closure Commission. Pease Air Force Base was recently closed. That is the first closure. The program's expected savings, including expected land value, are $4.5 billion, but these savings are offset in fiscal years 1989 through 1995 by $3.2 billion in expenses of refacilitizing and moving our people. The bottom line is the taxpayers can expect, beginning in fiscal year 1996, to save $700 million annually.

On April 12 of this year Secretary Cheney provided the Defense Base Closure and Realignment Commission and the Congress new closure and realignment recommendations. We estimate the total savings to be $7.8 billion, but again there will be implementation costs. Those implementation costs over that period are $5.7 billion. Environmental restoration costs will be $1.4 billion. After 1997, we will expect to save almost $1.7 billion annually and realize an additional $600 million in land value as we dispose of the closed bases.

Next I would like to discuss the Defense Business Operations Fund. We are continually searching for ways to become more efficient and provide better support to operating forces. To help realize these objectives, the Defense Department proposed the establishment of the Defense Business Operations Fund, or DBOF as it is called. The DBOF will distribute the cost of support activities to operational units. I would say, to summarize my remarks on DBOF, that I think this makes good business sense for a particular function to recognize its costs and to allocate those costs against a number of functions, including capital improvements. I know that you had a detailed discussion about DBOF yesterday. We are willing to discuss anything you want. My remarks are generally going to be directed at the capital improvement portion of DBOF.

We have two legislative proposals for family housing programs. We are asking the Congress to extend family housing leasing, Section 801 housing, and the housing rental guarantee program, or Section 802 housing.

Section 801 began as a pilot program in 1984. To date, the Department has 25 contracts in force. It gave us nearly 9,000 housing units. We are also aggressively pursuing Section 802. Each service plans to use all of its currently authorized number of units and each needs 2,000 more units. We recently received an offer from a developer to build Section 802 housing on government land at the Marine Corps Air Station at Kaneohe. That is our first project.

To sum up the Sections 801 and 802 housing, we think, regardless of the scoring questions that you raised in your opening statement, Senator, this program makes sense. We think the down side risk of not granting the extension, or of granting them, is minimal to nonexistent. We are working this scoring issue. We hope we will get a reasonable final determination on that. In the meantime, we need congressional authority to continue the programs.

Another key proposal concerns our ability to perform minor construction work. Cost ceilings for such work were last raised in 1982. We propose the ceilings to be increased from $200,000 to $300,000 for projects funded by O&M, and from $1 million to $1.5 million for projects funded through military construction.

Environmental laws are becoming more complex and are resulting in more facilities modernization requirements. We are asking for the authority to fund projects that are vital to protect the environment, and to ensure personal health and safety. We would fund such projects by reprogramming Milcon appropriations up to $30 million annually for each department.

These are our legislative changes, and we strongly request your support for each proposal. Thank you for giving me the opportunity to give the opening statement.

[The prepared statement of Mr. McMillan follows:]

PREPARED STATEMENT BY COLIN MCMILLAN, ASSISTANT SECRETARY OF DEFENSE (PRODUCTION AND LOGISTICS)

INTRODUCTION

Mr. Chairman and members of the committee, it is a pleasure for me to review with you today the Department of Defense Military Construction program for fiscal years 1992 and 1993, the military base structure for now and the future, and the Department's legislative proposals to improve its facility management.

Two dramatic circumstances reflect the recasting of the future of world security. On the one hand, the positive developments in Europe greatly altered our approach to national security and give rise to hopes of reduced tensions and U.S. defense requirements. On the other hand, the Persian Gulf conflict starkly points out that the risk of military aggression remains all too real. It is the uncertainty of this new world order that drives today's U.S. force structure, and its sustaining base structure.

Military strength, however, is more than the number of troops or the amount of weapons. It depends on many ingredients; a strong defense infrastructure to support our forces is one of the most important.

FACILITY INVESTMENT—NOW AND THE FUTURE

We invest in defense facilities so our military and civilian people have the working and living places they need to do their best work, and so we will be able to recruit and retain the people we need. During testimony on the Gulf crisis, Secretary Cheney stated "our greatest strength is our men and women in uniform. Their quality is our most fearsome weapon."

Our commitment to facility investment is a means to build on this strength. I thank this committee for its support of defense facility investment. However, with declining defense budgets, we must recognize the limits on our ability to act on our commitment. The Department's funding targets established at last fall's budget summit constrain the Military Construction request for fiscal years 1992 and 1993.

The following table highlights recent funding and our budget requests for Military Construction and for major repair and minor construction.

Military Construction, Major Repairs and Minor Construction

[Millions of current year dollars]

	Fiscal year 1989 appropriation	Fiscal year 1990 appropriation	Fiscal year 1991 appropriation	Fiscal year 1992 request	Fiscal year 1993 request
Construction Projects	$5,405	$4,445	$4,129	$3,554	$1,046
Planning and Design	442	394	402	369	297
NATO Infrastructure	492	425	193	359	266
Base Closures/Realignments	0	500	998	734	541
Family Housing Operations & Maintenance	2,642	2,766	2,953	3,127	3,283
Major Repair & Minor Construction [1]	0	0	0	0	[1] 1,830
Total MilCon Appropriation	8,981	8,530	8,675	8,143	7,263
Major Repair & Minor Construction [1]	2,107	2,010	1,870	1,560	[1] 0
Minor Repair & Maintenance	2,853	2,910	2,580	2,430	2,490
Total RPM—O&M Appropriation	4,960	4,920	4,450	3,990	2,490
Total MilCon & RPM	$13,941	$13,590	$13,265	$11,923	$9,753

[1] The President's budget proposes moving minor construction and repair investments to Military Construction accounts beginning in fiscal year 1993.

MILITARY CONSTRUCTION

The fiscal year 1992 Military Construction request is $8.1 billion. This will fund only the minimum construction needed to field new weapon systems, accomplish new or changing missions, and provide for the most pressing replacement of existing facilities. Our request for fiscal year 1993 is $7.3 billion, including major repairs and minor construction previously funded by other appropriations. The details of project and funding requests already were provided to the Congress as part of the budget justification, so I will not repeat them now.

The fiscal year 1993 Military Construction program is not as large as the annual programs we requested over the past decade. The "pause" is due primarily to the limited resources available in the Defense budget to afford all the needed defense programs. While facility investment remains very important to the Department, given the lower overall level of resources, a lower funding level was determined to be one of the least disruptive alternatives available to the Department.

CONTINGENCY CONSTRUCTION

Within Military Construction, the contingency construction account, established under section 2804 of title 10 U.S.C., is the only source of funds available to the

Secretary of Defense to build facilities vital to national security that cost more than $1 million without canceling other approved projects. Use of this account is the most effective way to ensure such critical facilities can be built.

In the past several years, this authority was used to build portal sites needed by the On-Site Inspection Agency to monitor disarmament treaty compliance, test facilities for electronic countermeasures used in precision guided missile systems, and a waterline to provide potable water to about 25,000 people at a defense complex.

The need for such projects cannot be predicted and the construction cannot be delayed until the next budget submission. Without contingency construction, defense capability would suffer. We request $15 million for fiscal year 1992 and $10 million for fiscal year 1993 to meet contingency construction requirements.

OVERSEAS CONSTRUCTION

The Department strongly supports the relocation from Torrejon Air Base, Spain to Crotone, Italy. In December 1990, NATO ministers reaffirmed retaining the 401st Tactical Fighter Wing in the Southern Region is even more important than it was previously. With fewer forces planned for deployment to Europe in the future, the remaining forces must be based at the most operationally advantageous locations. Those ministers also confirmed there are no existing bases that could adequately support the mission of the 401st. The ability to provide responsive, flexible and highly capable air power in a potentially unstable region will assume greater importance in the years ahead.

The Military Construction budget also contains a request for $358,800,000 for NATO Infrastructure in fiscal year 1992 and $266,200,000 in fiscal year 1993. Full funding is needed to allow the United States to meet its obligations for projects already under contract, fund essential restoration and repair of existing facilities, ensure the continued flow of recoupments, and support NATO funding to execute the recent Conventional Armed Forces in Europe Treaty.

REAL PROPERTY MAINTENANCE

Adequate funding of real property maintenance is essential. It:

- Preserves our existing facilities so they may continue to be used for their intended purposes;
- Provides the working and diving places our military and civilian people need to do their best work;
- Helps retain the best people; and
- Contributes to a high level of mission capability.

For fiscal year 1993, we request $1.8 billion of real property maintenance be funded through Military Construction Appropriations. Up to now, repair projects costing over $15,000 and minor construction projects costing less than $200,000 were funded primarily with Operation and Maintenance Appropriations. We propose to transfer this work to Military Construction so all facility investment is funded from those Appropriations. We consider minor repairs and recurring maintenance to be expenses rather than investments, and would continue to fund them with O&M or R&D Appropriations.

Since Military Construction appropriations are generally available for 5 years, authorizing and appropriating minor construction and major repairs in the Military Construction program will improve project planning and award without the urgency to obligate resources that now expire annually.

BASE CLOSURES AND REALIGNMENTS

The Department is committed to balancing our force and base structures to reflect current budget realities and the changed threat to our Nation's security. We plan to substantially reduce the size of our force, and, therefore, must reduce the number of bases that support those forces. Our national security requires that we extract the maximum amount of defense capability from increasingly scarce resources.

We made significant progress in implementing the recommendations of the 1988 Base Closure Commission. The recent closure of Pease Air Force Base was the first major closure resulting from that Commission's recommendations, and the first in over a decade. The program's total expected savings (including expected land value) is $4.5 billion, which must be offset in fiscal years 1989 through 1995 by implementation costs of $3.2 billion and environmental restoration costs of $.5 billion. Hence, the taxpayer can expect net savings of over $.7 billion during implementation. After 1995, we expect to realize $700 million in annual savings from these closures and realignments.

Secretary Cheney provided the Defense Base Closure and Realignment Commission and the Congress new closure and realignment recommendations on April 12. We estimate total savings (including land value) to be $7.8 billion. This must be offset by $5.7 billion for implementation and $1.4 billion for environmental restoration, since public law designates the Base Closure Account as the exclusive source of funds for environmental restoration projects at bases affected by closures or realignments. After 1997, we expect to realize almost $1.7 billion in annual savings from these closures and realignments, as well as an additional $600 million in land value.

To implement the 1988 Commission recommendations, we request $633,500,000 for fiscal year 1992 and $440,700,000 for fiscal year 1993. The Congress established a new base closure account for the 1991 process. Our budget request includes $100 million for fiscal year 1992 and $100 million for fiscal year 1993 to be used for planning and design of facilities needed to implement new closure actions. We recognize additional funds will be required to build those facilities and meet other related closure and realignment costs.

DEFENSE BUSINESS OPERATIONS FUND

The Department proposes establishing a Defense Business Operations Fund to realize efficiencies and improve support for our operating forces. This fund, or DBOF as it is called, will distribute the full cost of support activities to operational units receiving the support. Military Construction is one such activity. For Military Construction, the DBOF will have the people who are served by facilities pay for them.

We request Military Construction totaling $420 million in fiscal year 1992 and $74 million in fiscal year 1993 be funded through the DBOF. This construction was already programmed at bases covered in the initial implementation phase of the DBOF; therefore, authorization is requested in the Military Construction Authorization bill and appropriations are requested in the Defense Appropriations bill.

MILITARY CONSTRUCTION OVERSIGHT

Now, I would like to discuss the Department's continued careful oversight of Military Construction work. In January 1990, as planning for restructuring our defense establishment began in earnest, Secretary Cheney instituted the original moratorium on Military Construction. At that time, we knew we needed to reduce our base structure; consequently, careful stewardship of our limited resources meant deferring new construction until we determined which bases would remain open.

This past fall, a new base closure process was established by law. We could no longer proceed with a project because we thought the base would remain open, and stop a project at another base because we thought it would close. The law stated we had to treat all bases equally.

Now that Secretary Cheney provided his recommendations to the Commission on Defense Base Closures and Realignments, the Department has new rules governing Military Construction. But with an evolving global security environment and constrained resources available for national defense, the Department must continue to be cautious as it executes Military Construction projects. For these reasons, the award of contracts for construction projects affected by personnel reductions due to base closures or realignments, or construction projects for locations in Europe, Japan, Korea or the National Capital Region, require approval by the Deputy Secretary of Defense. Other construction projects may be awarded with approval by the Secretary of the Military Department or Director of the Defense Agency. This careful stewardship will help ensure long-term capital investments are only approved for installations that will remain in the DOD infrastructure for the foreseeable future.

LEGISLATIVE PROPOSALS

I now would like to highlight the management improvements we are seeking through legislative changes.

The first proposals concern the Department's authority to acquire private housing for use by our military families. We ask that the family housing leasing program, referred to as Section 801 housing, and the housing rental guarantee program, Section 802 housing, be extended.

Section 801 housing began as a pilot program with legislation enacted in 1984. This program was extended and expanded in succeeding years, and we ask that it be extended through fiscal year 1993. To date, the Department has 25 contracts in force totaling nearly 9,000 units. Our experience shows this program is a worthy alternative to appropriated funded construction in meeting family housing requirements in areas of the United States where enough adequate housing is not available.

The Department is aggressively pursuing Section 802 projects as another means for military families to have adequate housing. We recently received an offer from a private developer to build Section 802 housing at the Marine Corps Air Station, Kaneohe, Hawaii. The project will cost the Department nothing for construction. The developer will use government land and the military families who occupy this new housing will pay rent directly to the developer. There is little risk to the government, which guarantees minimum occupancy; if enough military families do not rent the housing, the developer will offer it to the public. Rents for our military families will be much less than they would pay off-base. The government will only pay for utilities usage and municipal services; this is allowed by recent legislation to help make this program viable. We propose this program be extended. Each service plans to use all of its currently authorized number of units, and each needs an additional 2,000 units authorized.

Another proposal concerns the test of long term facilities contracts. This test currently authorizes the Secretaries of the military departments to contract for certain activities and services at military installation. Such activities include child care, troop housing, utilities, transient quarters and medical facilities. The Department is beginning to realize benefits from this authorization and we propose this authority be extended for 2 years.

The Conference Committee Report for the Omnibus Budget Reconciliation Act of 1990 prescribes scorekeeping guidelines that affect Section 801 housing and the test of long term facilities contracts, and may affect Section 802 housing. As we have not yet applied the new scoring guidelines to these privately financed projects, it remains uncertain just how they will affect future budgets. We do feel, however, that these programs can be valuable, viable alternatives for meeting the quality of life needs of our people. Accordingly, these authorities should be extended, allowing the Department the ability to continue these programs once the scoring matter is settled.

Another key proposal concerns our ability to perform minor construction work. Cost ceilings for such work were last raised in 1982, and are currently $200,000 for minor construction projects funded with O&M Appropriations and $1 million for such projects funded with Military Construction Appropriations. We propose the ceilings be increased; up to $300,000 for projects funded with O&M Appropriations and $1,500,000 for projects funded through Military Construction. These changes in the dollar thresholds would provide the Department the same authority in 1992 dollars that it had in 1982. That is, a $1,500,000 project today will give us about the same construction we could buy in 1982 for $1,000,000. Approval of this proposal will help eliminate administrative delays caused by small dollar projects being forced through the same processes as large construction projects. About 30 percent of all budgeted Military Construction projects cost less than $1,500,000, but the cost of these projects is only about 4 percent of the total for all construction projects. We also ask that the threshold on Guard and Reserve minor construction funded with O&M Appropriations be raised from $200,000 to $300,000 so it is consistent with the O&M limit.

The Department proposes emergency construction authority to cover environmental emergencies that pose a threat to the public or the environment. This authority would be restricted to projects that are vital to protect the quality of the environment as well as personal health and safety, and that cannot wait for inclusion in an authorization act. Such projects would be funded by reprogramming available Military Construction appropriations, up to $30 million annually for each military department.

Another legislative change would allow the Department to acquire an option on real property we intend to lease mainly for recruiting and Reserve component requirements, while approval of the lease is processed. We have lost the chance to lease desirable locations by our not being able to execute an option quickly.

A proposal related to Reserve facilities would allow the Department to contribute to a State for the acquisition or construction of joint use facilities located on State-owned property. Current law permits DOD to contribute to a State for expansion, rehabilitation and conversion of joint use facilities, but does not allow contributions for acquisition or construction. By being able to work with the States to construct larger, joint use facilities, we expect to realize cost savings that can be used to provide additional, needed facilities.

In Alaska during the winter, the daylight hours are so limited that there is no time for children to play outdoors in the daylight after school. This, coupled with the cold, dry, isolated conditions make family life extremely stressful. For our military families stationed in Alaska, recreation in their homes offers one way for them to improve the quality of their lives. Much of the Department's family housing in Alaska has an unfinished basement and/or attic that, if finished for family recreation, could add to the homes' habitability. Usually, finishing the space would require additional lighting, floor covering and covered walls and ceiling. If the services were to covert these unfinished basements and attics into indoor recreation space, the units would exceed the current allowable maximum net floor area. We propose legislation that would permit excluding up to 300 square feet from the statutory maximum so that indoor recreation space could be created within existing areas of military family housing located in Alaska.

The Homeowners Assistance Fund is a no-year revolving fund that provides financial help to military and DOD civilian people adversely affected by significant personnel reductions at a base. Section 2832(b) of title 10, U.S. Code permits money from the Base Closure Account to be transferred into the Homeowners Assistance Fund, but the funds so transferred expire on September 30, 1991. We propose legislation to eliminate this expiration date, thereby enabling the Department to use the funds to assist eligible people affected by base closure and realignments authorized by Public Law 100–526.

The Homeowners Assistance Program also covers civilian and military people transferred overseas. The current law limits the benefits of the program to only those people who are unaccompanied by dependents and whose transfer occurs within 15 months prior to the base closure announcement. However, many overseas tours last 2 years or more. A DOD employee who owns a home near a stateside base and is transferred overseas more than 15 months before an announcement to greatly reduce or close that base, would currently not be covered by the Homeowners Assistance Program. We propose extending the current legislation to cover employees transferred overseas up to 3 years prior to an announcement of a closure at their prior base and to eliminate the limitation on "unaccompanied by dependents."

We propose legislation to exempt agreements between the U.S. and NATO Governments for military and family housing construction from the requirement to incorporate certain clauses now required by law. Such clauses include prohibition on gratuities, prohibition against contingent fees, and officials not to benefit. The inclusion of these clauses in agreements between us and our NATO allies caused breakdowns in wartime support negotiations with Belgium and the Netherlands. Congress recognized the inapplicability of these clauses in government-to-government agreements and enacted the NATO Mutual Support Act to exempt certain acquisitions. The proposed legislation would extend this policy to military and family housing construction.

To help more military members afford adequate housing, we propose modifying existing legislation that allows a member to avoid paying a rental security deposit to a landlord. Now, a military department may indemnify a landlord who leases a rental unit to a military member against a breach of the lease or damage to the rental unit by the member. But the procedures in the current legislation are overly cumbersome and discourage many landlords from participating in the program. The proposed changes continue to protect the government against any financial expenditures it may make as a result of an agreement, while making the member aware of potential liability. The government would continue to recover its costs should the member breach the lease or damage the unit.

Currently, the Department has temporary authorization to use turnkey selection procedures for military construction. Our experience indicates we should continue to use turnkey procedures, which are regularly used by private industry and other Federal agencies. A legislative proposal would remove the restriction on the number of turnkey projects each military department may execute in any year and make this authority permanent. The proposal also would assign approval authority for turnkey contracts to Secretaries of the military departments and Directors of the Defense Agencies.

These legislative changes will give the Department the authority we need to better manage our facilities. I strongly urge your support for each of these proposals.

CONCLUSION

I thank this committee for its past support and urge your continued backing of defense facility investments. This concludes my prepared remarks. I will answer any questions you may have.

Senator DIXON. Thank you. Ms. Livingstone.

STATEMENT OF HON. SUSAN M. LIVINGSTONE, ASSISTANT SECRETARY OF THE ARMY, INSTALLATIONS, LOGISTICS AND ENVIRONMENT

Ms. LIVINGSTONE. Thank you, Mr. Chairman and members of the committee. It is also a pleasure for me to appear before you to discuss the Army portion of the military construction request for fiscal years 1992 and 1993, as well as to discuss the status of base realignment and closure proposals within the Department of the Army. With me today are Maj. Gen. Offringa, the Assistant Chief of Engineers; Brig. Gen. D'Araujo, who is the Deputy Director of the Army National Guard; Brig. Gen. Bultman, who is Deputy Chief of the Army Reserves; and Col. Ed Brown and Mr. John Nerger, who have worked very assiduously on our base realignment and closure recommendations.

A little over a year ago we were witnessing dramatic changes in Europe. None of us will ever forget the most symbolic of these changes when we watched the Berlin Wall come down. Our focus shifted very dramatically and rapidly on August 2, 1990, when Iraq invaded Kuwait. This event underscored the necessity that despite the dramatic and, in some ways, very unprecedented, change that the world is undergoing, we must never slow our efforts to ensure that the United States has a fully trained and ready Army. In the Persian Gulf, we saw the results of that trained and ready Army, results that this committee made possible, in part by ensuring that we have the infrastructure needed to perform our mission and to sustain the quality living environment deserved by our professional soldiers and their families.

With the approval of the Army's fiscal years 1992 and 1993 requests for military construction, both for the Active and Reserve components for Army family housing and for the homeowners assistance program, we will be able to continue to support Army, defense and national initiatives, provide adequate housing for soldiers, work toward eliminating obsolete and deficient work areas, meet statutory and regulatory requirements, and repair essential facilities. This request also will provide some additional family housing to meet our most critical requirements. In addition, the homeowners assistance program request will show our personnel that even in these times of change we will assist those who are adversely affected by our actions. These budget requests are austere, Mr. Chairman, but they do fund our highest priorities and our most critical needs.

I would like to now briefly shift from construction requests to the base realignment and closure process. The dramatic restructuring we are undergoing was necessitated both by adjustments to military strategy as a result of the dramatic changes in Eastern Europe and the Soviet Union, but also to meet the expectations of reduced budget resources for national defense. As we have approached base realignments and closures in the Army, we have proceeded within the context of an orderly, phased restructuring of the Army.

The 1988 Commission on Base Realignment and Closure recommendations are being implemented, on track, and our schedules show that they will be completed by the end of fiscal year 1995 as required by law. Recurring savings from implementation of the 1988 recommendations are projected to be $264 million per year starting in 1996. The additional closures and realignments announced in January 1990 also are on track except for the proposals associated with Forts McClellan, Ord, Gillem, Troop Support Command, and the Red River and Sacramento depots. Those proposals were canceled and those sites were revisited and reviewed on an equal footing with all Army installations in accordance with the newest base realignment and closure process specified in Public Law 101-510.

Based on the Public Law 101-510 review, the Army has recommended eight additional installation closures and a number of realignments to the new Defense Base Closure and Realignment Commission. This Commission, which we refer to as the BRAC 1991 Commission, is now considering these Army recommendations which we project will produce recurring savings of $462 million beginning in 1998.

The Army also has announced to date the return to host nations of 140 installations overseas. The majority of these sites, 124 of them, are in Germany, with 2 sites in Greece, 2 sites in the United Kingdom, and 12 in Korea. Eighty-seven of these 140 sites were scheduled to begin closure actions in fiscal 1991, the current fiscal year. Eighty-three closure actions are on schedule, with the remaining 4 installations which we had hoped to close in fiscal 1991 affected by Operation Desert Storm. These four sites are predominantly troop barracks in Europe. Out of the 83 closure actions that are on schedule for fiscal 1991, 19 of these sites have been closed as of April 24 of this year.

The Army is very supportive of the new base realignment and closure process, and considers it essential that it succeed. The significant 25 to 30 percent reductions that will occur within the Army over the next few years dictate reductions in our base structure. Quite simply, as we reduce in size we have more installations than we need and we have more installations than we can afford. We are most appreciative of this committee's support as we proceed with a very difficult, but necessary, task.

In closing, Mr. Chairman and members of the committee, as we shape the Army's force and support structure and build down to a smaller Army, I wish to assure you that with your support it will remain an Army of quality people and quality facilities, modernized and ready to meet all levels of threat, as well as provide the peacetime support that this Army has always offered to the Nation. Thank you very much. I look forward to answering your questions.

[The prepared statement of Ms. Livingstone follows:]

STATEMENT BY

SUSAN LIVINGSTONE

ASSISTANT SECRETARY OF THE ARMY

(INSTALLATIONS, LOGISTICS AND ENVIRONMENT)

REGARDING

FISCAL YEARS 1992 AND 1993:
MILITARY CONSTRUCTION, ARMY
MILITARY CONSTRUCTION - ARMY RESERVE
MILITARY CONSTRUCTION - ARMY NATIONAL GUARD
BASE REALIGNMENTS AND CLOSURES (BRAC)

Mr. Chairman and members of the subcommittee, it is a pleasure for me to appear before you to discuss the Army's portion of the military construction request for fiscal years 1992 and 1993. Also, I will discuss the status of base realignment and closure proposals within the Department of the Army. These issues are clearly of considerable importance to the Army, as well as this Committee, and we appreciate the opportunity to report to you on them.

My hearing statement is broken into four parts:

PART I - MILITARY CONSTRUCTION, ARMY

PART II - MILITARY CONSTRUCTION, ARMY RESERVE

PART III - MILITARY CONSTRUCTION,
ARMY NATIONAL GUARD

PART IV - BASE REALIGNMENT AND CLOSURE (BRAC)

PART I

MILITARY CONSTRUCTION, ARMY

First, I will present the Army's portion of the military construction budget request for fiscal years (FY) 1992 and 1993. This program will provide some of the essential facilities required to support our Army in its transition to a smaller, more compact fighting force. The program presented requests authorization of appropriations for Military Construction, Army (MCA) of $851,300,000 in FY 1992 and $959,800,000 in FY 1993, and for Army Family Housing we request authorization of appropriations for $1,534,425,000 in FY 1992 and $1,476,927,000 in FY 1993. We are also requesting $84,000,000 and $85,000,000 in FY 1992 and FY 1993, respectively, for the Homeowners Assistance Program, which the Army manages for the Department of Defense.

The FY 1992 and 1993 budget requests reflect the fiscal constraints we are jointly experiencing. The budget continues to fund projects that support the operational readiness of the Army worldwide. This year's military construction budget also supports the Secretary of the Army and the Chief of Staff's efforts to shape the Army for the future. At the same time, the budget provides some quality of life improvements necessary to attract and retain dedicated individuals to service in the Army and to minimize the effects of the turbulence in the force structure actions. Moreover, the budget continues to fund facilities for the execution of the Chemical Demilitarization program as scheduled by treaty and current law.

The Military Construction, Army (MCA) program constitutes 1.2 percent of the total Army budget request in FY 1992 and 1.4 percent in 1993, while the Army Family Housing program represents 2.2 percent of the total Army budget in both years. Although these funds finance both new construction and the revitalization of the facilities our soldiers need to live, train, and maintain sophisticated equipment, and provide the operation and maintenance of our family housing facilities, the FY 1992 and 1993 MCA requests support a small percent of the many facility demands. Twenty-five percent of the program in FY 1992 supports mission related projects, such as operations, training, maintenance and Research, Development, Test and Evaluation (RDT&E) facilities. An additional 16 percent of the request in FY 1992 is dedicated to the Chemical Demilitarization program. Because of the significantly smaller construction program in FY 1993, mission related requirements only constitute two percent of the program while the Chemical Demilitarization program is 19 percent of the request. Support facilities such as supply, administration, unaccompanied housing and community facilities make up 31 percent of the request in FY 1992 but only one percent in FY 1993. Utilities and real estate comprise 13 percent of the FY 1992 request and seven percent of the FY 1993 budget. In FY 1993, the largest portion of the budget, 62 percent, is requested for the major repair construction and minor construction projects (less than $300,000) transferred from the Real Property Maintenance Activities (RPMA) of the Operation and Maintenance, Army (OMA) and the Research, Development, Test and Evaluation (RDT&E) appropriations. The remaining balance provides for access roads, planning and design, and unspecified minor construction projects totalling 15 percent in FY 1992 and nine percent in FY 1993. All of these construction requirements have been reviewed in detail against the Army's restructuring plan and are essential for the Army to successfully perform its mission and care for its people.

In the family housing area, our thrust is to operate and maintain what we own. Sixty-eight percent of our resources in FY 1992 and 70 percent in FY 1993 is required to pay operations, utilities and maintenance expenses. Additionally, 24 percent in FY 1992 and 26 percent in FY 1993 will pay for the leasing of additional homes to provide adequate housing for our military families, with a correlating offset to the Military Personnel, Army (MPA) account. The remainder will be used to revitalize the current inventory, construct 470 new homes, complete planning and design and service the debt for the remaining mortgages for Wherry housing.

Just as the Army is in a process of change, so is this year's biennial budget request for military construction. There are several new and important changes in the budget which I will discuss later; but first I believe it is important to place our funding request in the context of our overall facilities strategy as it affects fielding of modern weapons systems, operational efficiencies and, most importantly, our soldiers and their families.

FACILITIES ACQUISITION STRATEGY

In the facilities arena, our mission is to meet the demands of a ready fighting force, support national objectives, and provide quality living and working conditions within the reduced resources available to ensure we attract, train, equip and retain quality soldiers. Based on the projection of a 535,000 end state for the active duty force by the mid-1990s we currently have more facilities than we need to house this force. As our budget resources decline, we also have more facilities than we can afford.

Based on these two parameters, we are pursuing a facilities acquisition strategy that focuses not only on needed installation closures and realignments as well as on-post consolidations and facility demolition but also on maintenance of the remaining critical infrastructure base. The Army's strategy, in priority, is to maximize the use of existing facilities; to meet regulatory and environmental requirements; and, to commit a prudent level of resources to support warfighting readiness, sustain and preserve Army facilities, revitalize facilities and begin to constain maintenance and repair backlogs. This facilities strategy must then compete for resources against other critical Army missions within the total funds available to the Army.

Although we recognize the need for additional funds in the facilities area, budget constraints are such that the requests for military construction and family housing are limited. Thus, we were left with less for the construction programs, particularly in FY 1993. We remain committed to taking care of what we have before building new. Any decision to provide a new facility is made only after detailed analysis of the alternatives shows that there is no other economically acceptable solution. Thus, projects that are classified as facility upgrade or modernization do not have a lower priority; they merely present the optimum alternative as the facilities strategy is applied.

As the Army transitions to a smaller force, we must not presuppose that construction of new facilities is not necessary.

We must plan for a reduced force structure by not only reducing the facilities that are not required, but also by replacing the facilities that are not economical to operate and maintain with economical, modern facilities. This new construction represents revitalization through facilities replacement. Additionally, we must streamline our base structure with selected base closures and realignments.

In the sections which follow, I will present the details of the biennial FY 1992 and 1993 MCA program, highlight selected initiatives and show the balance that we have achieved to provide support for the total Army. First, let us look at the three primary perspectives of our soldiers: working, training and living conditions.

WORKING AND TRAINING CONDITIONS

A significant amount of resources in FY 1992, over 40 percent, is devoted to improving the working and training conditions and therefore the readiness of our soldiers. We are providing modern facilities for instructional, logistics, training and administrative support of Army operations. Clearly, better facilities lead to better performance. Accordingly, better performance leads to a corresponding increase in military readiness and warfighting capability. A total of $346,600,000 is included in the FY 1992 request to ensure this support will be sustained, and includes $19,550,000 for operational projects, $43,550,000 for training ranges and facilities, $145,300,000 for maintenance and production, $6,600,000 for Research, Development Test and Evaluation and $131,600,000 for administrative.

In FY 1993, because of the paucity of available resources, the main thrust is to provide funding for the Chemical Demilitarization program and only critical health, safety and environmental projects.

LIVING CONDITIONS

Although the Army continues to support the Quality of Life for our soldiers, troop housing and community facilities have been reduced from requests of previous fiscal years as funding is further constrained. The operational necessity of sustaining a ready Army and high priority defense initiatives have forced us to slow down on one of our most successful and visible programs to improve the quality of the living conditions for our soldiers and their families. Troop housing and community support facilities total $92,800,000, 11 percent, for FY 1992 and $4,700,000, less than one percent, for FY 1993.

In the Unaccompanied Housing category, the FY 1992 request of $56,400,000 contains 1,032 spaces of new construction, and 1,136 spaces of revitalized construction. Due to the budget constraints in FY 1993, funds were not requested for unaccompanied housing.

The morale, welfare and recreation type projects in the community facilities program also reflect the severe budget constraints in both FY 1992 and FY 1993. Our request includes a mix of 12 critically needed community facility projects totaling

$36,400,000 in FY 1992 and one project for $4,700,000 in FY 1993, as indicated in the following display:

COMMUNITY FACILITY PROJECTS

	FY1992	FY 1993
Chapel	1	0
Chapel Family Life Center	2	0
Child Development Center	3	1
Physical Fitness Training Center	3	0
Fire Station	2	0
Tri-Service Fixed Laundry Facility	1	0

GEOGRAPHICAL DISTRIBUTION HIGHLIGHTS

UNITED STATES. Our budget request in support of projects inside the U.S. provides $629,800,000 or 87 percent of the FY 1992 construction resources. In FY 1993, 78 percent, $220,000,000, is requested for construction projects in the U.S. The projects are located at installations in 26 states for FY 1992 and four states for FY 1993. Projects totaling more than $20 million in construction in FY 1992 are located in each of the following states: Alabama, Indiana, Kentucky, Louisiana, New Jersey, Texas, Virginia, and Washington; and for fiscal year 1993: Arkansas and Oregon.

EUROPE. Our construction program for the United States Army, Europe (USAREUR) totals $1,550,000 for FY 1992 and $12,200,000 for FY 1993. The two projects in FY 1992 are Productivity Investment Funding projects that will have a quick pay back for the relative small investment and are at locations that will not close under any foreseeable scenario. In FY 1993, one project is requested for a sanitary landfill expansion at the Grafenwoehr training area to assure U.S. and host nation environmental laws are not violated. Future programs will be developed as the mission needs of the smaller European force are finalized. Additionally, in FY 1993, one project for $3,000,000 is requested for an essential sewage treatment plant in Turkey.

WESTERN PACIFIC. The Army continues to support its commitment in the Western Pacific with a $16,950,000 FY 1992 request in support of the Eighth U.S. Army in Korea. Once again our program provides the facility support to the major initiatives of the Commander-in-Chief of U.S. Forces in Korea. Let me emphasize that while our construction standards at these locations are austere, they are consistent with enhancing individual, unit, and equipment readiness within the realities of an unaccompanied overseas environment.

KWAJALEIN ATOLL. In FY 1992 and 1993, the budget request for construction to support the U.S. Army Kwajalein Atoll is $77,400,000 and $45,500,000, respectively. This large investment is due to the continued importance of Kwajalein Atoll in missile research and development programs. U.S. Army Kwajalein Atoll is one of two U.S. sites authorized under the 1972 Antiballistic Missile (ABM) Treaty for the conduct of strategic defensive research and development programs. The isolation of Kwajalein Atoll provides the ideal environment for testing antiballistic missiles, studying the reentry characteristics of ballistic missile systems, and for space tracking of new foreign launches. The request in FY 1992 includes eight projects to support both mission and quality of life requirements as well as a utility project for an essential power plant addition, $33,000,000, on Kwajalein Island. In FY 1993, there are four projects. Three projects are for environmental requirements and an additional project, $27,700,000, is for a replacement power plant on Roi-Namur Island.

SPECIAL PROGRAM HIGHLIGHTS

REVITALIZATION OF ARMY FACILITIES. We clearly recognize the importance of building an infrastructure that provides a solid foundation for sustaining a quality Army. Our facilities revitalization program accomplishes this by renewing the foundation with modern facilities commensurate with the needs of our high quality force. With declining defense budgets and reductions in our force structure, we must begin to streamline our military base structure. Our goal is to reduce our existing facilities base. The smaller Army of the future will allow us to consolidate activities into our best facilities and revitalize those facilities remaining after force reductions. As our facilities base declines, we must continue to maintain an adequate level of funding. The current budget has a revitalization investment rate, in both Military Construction, Army (MCA) and Real Property Maintenance Activities (RPMA), of about .68% of the Army's facilities Plant Replacement Value. Although this funding rate is below our goal, it does provide a minimum level of construction to continue our efforts to provide adequate living and working conditions for service members and their families. We are totally committed to improving this rate of investment and hope it can be accomplished as force structure and basing decisions are made. These actions, coupled with several Army initiatives, should provide the means necessary to maintain quality facilities for our high quality force.

ARMY ENVIRONMENTAL COMPLIANCE. The FY 1992 and 1993 programs include ten projects for environmental compliance totaling $40,900,000 in FY 1992 and $45,000,000 in FY 1993. Three projects in the fiscal year 1992 budget are for sewage or waste water facilities at Fort Dix, Fort Knox and Fort Campbell. One project at Fort Lewis will provide a water treatment plant. In FY 1993, the budget supports two landfills, one at Pine Bluff Arsenal, Arkansas, and one at Grafenwoehr, Germany, as well as a sewage treatment plant in Turkey and solid waste incinerator at Kwajalein.

CHEMICAL DEMILITARIZATION. I am pleased to inform you that the construction of the Chemical Demilitarization Training Facility, in Aberdeen, Maryland, is nearing completion. Training laboratory workers for the Tooele Chemical Demilitarization Facility will begin in October 1991, followed by training of the operation and maintenance workers in January 1992.

- Construction of the Tooele Chemical Demilitarization Facility, in Utah is approximately 10 percent complete. Construction is scheduled for completion in July 1992 followed by systemization in August. The FY 1992 request includes

$14,700,000 for Phase III to complete construction of the Tooele Chemical Demilitarization Facility.

- In our FY 1991 budget, we had included a project for a chemical demilitarization facility at Anniston Army Depot, Alabama. After submission of that request, the overall program schedule was revised and construction of the Anniston chemical demilitarization facility is now planned for FY 1992 at $96,200,000. Site preparation, however, will begin in FY 1991. In FY 1992, we will also begin a $4,100,000 project to construct a toxic change house, parking areas, battery recharge facility and refueling pad, and expand the toxic laundry to support the chemical demilitarization facility.

- In FY 1992, the support facilities at Pueblo Army Depot, Colorado, will be started with a $6,300,000 project. This work includes a new toxic chemical workers' change house and laundry, modification of a chemical munitions maintenance facility for reconfiguration, and upgrade roads, water and sewage systems. In support of the chemical disposal facility at Umatilla Depot Activity, we will construct new electrical and water lines, for $7,500,000, and construct a laundry, upgrade and renovate the chemical munitions monitoring laboratory, toxic change house, laundry, and roads for $3,600,000.

- In FY 1993, we will initiate construction for the chemical demilitarization facilities at Pine Bluff Arsenal, Arkansas, costing $57,600,000, and Umatilla Depot Activity, Oregon, for $117,200,000. We will also construct and expand facilities to support the chemical demilitarization operations at Pine Bluff Arsenal for $11,000,000.

- In total, the FY 1992 chemical demilitarization program is $132,400,000, or 15.5 percent of the MCA request, while the FY 1993 program is $185,800,000 or 19.4 percent.

ADMINISTRATIVE BUILDING, FORT BENJAMIN HARRISON. The Administrative Building, Building 1, at Fort Benjamin Harrison, Indiana, is the largest administrative building in the Army inventory. This 40 year old building is in desperate need of renovation. Building 1 is designated as the headquarters for the Defense Finance and Accounting Services, Indianapolis (DFAS). Additionally, it will serve some 70 smaller tenant activities. The major construction renovation, $125,000,000, will completely revitalize a structure that is basically sound but in need of complete updating of the infrastructure. Work planned includes removal of asbestos; replacement of the major components such as electrical, plumbing, heating and air-conditioning, and fire protection systems; and installation of raised floors for the Army's central computers for the Finance and Accounting Center.

This is the largest rehabilitation of an administrative facility undertaken by the Army and is planned to be funded over the period 1992 through 1997. Funding for the first phase, $25,000,000 in FY 1992, will relocate approximately 20 percent of the 4,600 occupants to temporary space, and renovate the vacated space. After renovation, the completed space will be back-filled and the next phase undertaken.

DEFENSE BUSINESS OPERATIONS FUND. The proposed establishment of the Defense Business Operations Fund (DBOF) is a major change intended to improve management of the Department of Defense's vast support structure. The goal of the DBOF is to identify the full costs of providing support to operational units using established cost accounting and budgeting procedures. This fund will provide a system to capitalize costs, such as construction and major repair, similar to methods used by businesses to capitalize their major expenditures. Because we will identify support costs and thereby be able to reduce overhead, we expect to improve the management of scarce resources on those outputs that yield the best return on investment.

The concept of DBOF transfers construction projects at selected Army industrial fund locations to the fund in the amounts of $18,870,000 for FY 1992 and $19,800,000 for FY 1993. The military construction budget contains requests for authorizations for five projects in FY 1992 and four additional projects in FY 1993. These capital construction projects will be funded from the DBOF revolving fund, but to maintain Congressional oversight, will be authorized in the "capital" portion of the budget.

REAL PROPERTY MAINTENANCE. The second major change to this year's biennial budget is the transfer, beginning in FY 1993, of portions of the Real Property Maintenance Activities (RPMA) to the military construction budget. The FY 1993 budget includes both minor construction (projects less than $300,000) and major repair construction. Funds, $591,000,000, were transferred from the Operation and Maintenance, Army (OMA) and Research, Development, Test and Evaluation (RDT&E) appropriations into military construction appropriations. This transfer will fund projects that substantially prolong the useful life of facilities and qualify as actual facility investments. This transfer will realign all facility investments within the Army military construction appropriations. Not all of the funding for Army's Real Property Maintenance Activities has been transferred; the recurring maintenance and minor repairs, under $15,000, as well as the utilities account and the engineer support account, will continue to be funded out of the OMA and RDT&E appropriations.

This realignment will permit Commanders to better plan within available resources, to better develop and execute major repair construction projects, and to improve obligation of these scarce resources. Improved decision making will be realized with trade off analysis of repair versus other alternatives being considered among funds in the same appropriations. We transferred $155,000,000 in FY 1993 for minor construction projects (under $300,000) that were previously funded from the OMA and RDT&E appropriations, and $436,000,000 for major repair construction projects costing over $15,000.

The majority of the funds transferred, $436,000,000, will pay for repair projects costing over $15,000 in functional areas such as utilities systems, buildings and grounds, as well as, repairs of railroad trackage and other surface areas. The major repair projects funded within this amount provide revitalization through renovation of existing facilities. The remaining funds transferred, $155,000,000, will fund minor construction projects (less than $300,000) for work including the additions, expansions, extensions, alterations, conversions, or replacement of an existing real property facility. The erection, installation, or assembly of a new real property facility can also be accomplished with these funds.

BACKLOG OF MAINTENANCE AND REPAIR. When we cannot fund the annual recurring maintenance and repair requirements, the result is a Backlog of Maintenance and Repair (BMAR). BMAR is defined as an aggregation of major maintenance and repair projects that were planned for accomplishment in previous fiscal years but were not accomplished due to lack of resources. BMAR projects are routinely revalidated at least once each three years and on occasions more often.

There are several ways to reduce BMAR. By funding and completing outstanding M&R projects, we remove them from the backlog list. The requirement is also removed by accomplishing a new construction project and removing an older facility from the inventory. Another way we reduce BMAR is by deactivating or demolishing the facility requiring Maintenance and Repair (M&R) work or by closing all or part of the installation. However, BMAR cannot truly be reduced unless the annual recurring M&R requirements are fully funded and additional funds applied against backlog requirements. This will not happen in FY 1992 and 1993. The transfer of major repair construction projects to the military construction appropriation will permit a systematic expenditure of funds for major repair work. However, we must still focus on funding the annual recurring work paid for in both the Military Construction and the Operation and Maintenance, Army appropriations.

BMAR is an indicator of the condition of our real property assets. A high level of BMAR indicates a poor condition of facilities, and this will impact on the living and working condition of the soldier and his family. This, in turn, has a direct impact on force readiness. Based on current funding levels, we project Army BMAR will increase from $2.5 billion in FY 1990 to $5.7 billion by the end of FY 1993.

BUDGET REQUEST ANALYSIS OVERVIEW

MILITARY CONSTRUCTION, ARMY. The FY 1992 MCA budget request includes a request for authorization of appropriations of $851,300,000, along with a companion request for appropriations of $851,300,000. The total authorization is for $951,300,000 in FY 1992. In FY 1993, we are requesting authorization of appropriations and appropriations of $959,800,000.

The difference in the authorization and appropriations requests in FY 1992 is due to the request for authorization of construction of the Administrative Building at Fort Benjamin Harrison, Indiana, for the entire project, $125,000,000, while the appropriations request is only $25,000,000 for the first phase of the construction.

Authorization and appropriations request, by facility category, is shown in TABLE 1:

TABLE 1

PROPOSED FISCAL YEARS 1992-1993
MILITARY CONSTRUCTION, ARMY, PROGRAM
FACILITY CATEGORY AUTHORIZATION AND APPROPRIATIONS

	FY 92 MCA	
FACILITY CATEGORY	AUTHORIZATION ($000)	APPROPRIATIONS ($000)
Operations and Training	63,100	63,100
Maintenance and Production	277,700	277,700
Research, Development, Test and Evaluation	6,600	6,600
Supply & Administrative	266,300	166,300
Unaccompanied Housing	56,400	56,400
Community	36,400	36,400
Utilities & Real Estate	112,000	112,000
Access Roads	7,200	7,200
Design	114,600	114,600
Minor Construction	11,000	11,000
Total	951,300	851,300
	FY 93 MCA	
Maintenance and Production	203,300	203,300
Supply & Administrative	7,900	7,900
Community	4,700	4,700
Utilities & Real Estate	64,800	64,800
Design	83,100	83,100
Minor Construction	160,000[1]	160,000[1]
Repair of Real Property	436,000	436,000
Total	959,800	959,800

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[1] Includes $5,000,000 formerly included in the MCA Unspecified Minor Construction program, and $155,000,000 formerly RPMA funded Minor Construction projects.

TABLE 2 shows the facility categories in which funds are requested and the percentage of the construction by category.

TABLE 2

PROPOSED FISCAL YEARS 1992-1993
MILITARY CONSTRUCTION, ARMY, PROGRAM
FACILITY CATEGORY SUMMARY

FACILITY CATEGORY	FY 1992 COST ($000)	%	FY 1993 COST ($000)	%
Operations and Training	63,100	7	0	0
Maintenance and Production	277,700	33	203,300	21
Research, Development, Test and Evaluation	6,600	1	0	0
Supply & Administrative	166,300	20	7,900	1
Unaccompanied Housing	56,400	7	0	0
Community	36,400	4	4,700	<1
Utilities & Real Estate	112,000	13	64,800	7
Access Roads	7,200	1	0	0
Design	114,600	13	83,100	9
Minor Construction	11,000	1	160,000[1]	17
Repair of Real Property	0	0	436,000	45
Total	851,300	100	959,800	100

*1. See footnote[1] page 11.

TABLE 3 shows the FY 1992 and FY 1993 distribution of the authorization of appropriations request among major commands in the U.S. and overseas. Construction projects in the U.S. account for $629,800,000 in FY 1992, 87 percent of the major construction projects being requested, and $220,000,000 or 78 percent in FY 1993. Construction projects outside the U.S. comprise 13 percent of the major construction projects in FY 1992 and 21 percent in FY 1993, $95,900,000 and $60,700,000, respectively. Most of the request for overseas locations, $77,400,000 and $45,500,000 in FY 1992 and 1993, is for construction in Kwajalein for support of the Army Strategic Defense Command. This request also calls for planning and design, and minor construction of $125,600,000 in FY 1992. In FY 1993, the worldwide total request is increased to $679,100,000, with the addition of minor construction projects (under $300,000) and major repair construction.

TABLE 3

PROPOSED FISCAL YEAR 1992-1993
MILITARY CONSTRUCTION, ARMY, PROGRAM
COMMAND SUMMARY

FY 1992

COMMAND	COST ($000)	PERCENTAGE OF TOTAL
INSIDE THE UNITED STATES		
Forces Command	180,450	21.2
Training and Doctrine Command	140,350	16.5
Army Materiel Command	229,800	27.0
Army Pacific Command	24,850	2.9
Information Systems Command	8,300	1.0
US Military Academy	14,300	1.7
Army Health Services Command	3,750	0.4
Military District Washington	11,500	1.3
Other	9,300	1.1
Access Roads	7,200	0.8
Total	629,800	73.9
OUTSIDE THE UNITED STATES		
US Army, Europe	1,550	0.2
Eighth US Army, Korea	14,700	1.7
Information Systems Command	2,250	0.3
Army Strategic Defense Command	77,400	9.1
Total	95,900	11.3
Total Major Construction Projects	725,500	85.2
WORLDWIDE		
Planning and Design	114,600	13.5
Minor Construction	11,000	1.3
Total	125,600	14.8
Total authorization of appropriations requested:	851,300	100.0
INSIDE THE UNITED STATES		
Forces Command	17,500	1.8
Army Materiel Command	197,800	20.6
Army Pacific Command	4,700	0.5
Total	220,000	22.9

TABLE 3 (Continued)

COMMAND	FY 1993 COST ($000)	PERCENTAGE OF TOTAL
OUTSIDE THE UNITED STATES		
US Army, Europe	12,200	1.3
Intelligence Command	3,000	0.3
Army Strategic Defense Command	45,500	4.7
Total	60,700	6.3
Total Major Construction Projects	280,700	29.2
WORLDWIDE		
Planning and Design	83,100	8.7
Minor Construction	160,000[2]	16.7
Repair of Real Property	436,000	45.4
Total	679,100	70.8
Total authorization of appropriations requested:	959,800	100.0

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[2] Includes $5,000,000 formerly included in the MCA Unspecified Minor Construction program, and $155,000,000 formerly RPMA funded Minor Construction projects.

ARMY FAMILY HOUSING

I would now take this opportunity to present the Army's family housing portion of the military construction budget request for FY 1992 and 1993. This is one of the most important programs in the Army budget.

Adequate family housing continues to be one of our top goals. This request reflects the Army's attempt to provide suitable housing for our soldiers and to maintain the quality of the facilities entrusted to our stewardship. The family housing program provides quality of life improvements necessary to attract and retain dedicated individuals to service in the Army, thus attempting to reduce the turbulence in recent force structure actions. The FY 1992 and 1993 family housing budget includes a request (TABLE 4) for authorization of appropriations for $1,534,425,000 and $1,476,927,000, respectively. The accompanying requests for appropriations are for the same amounts.

TABLE 4

PROPOSED FISCAL YEARS 1992 and 1993
ARMY FAMILY HOUSING PROGRAM
AUTHORIZATION SUMMARY

	AUTHORIZATION ($000)	
FACILITY CATEGORY	FY 1992	FY 1993
New Construction	57,200	0
Post Acquisition Construction	74,980	58,240
Planning and Design	5,220	11,060
Operations	247,258	252,726
Utilities	321,602	326,684
Maintenance	467,207	448,159
Leasing	360,783	379,881
Debt Interest	50	50
Debt Principal	125	127
TOTAL	1,534,425	1,476,927

HOUSING PROGRAM ACCOUNTS. The Army Family Housing budget request includes resources for a minimal new construction program in FY 1992, minimal revitalization of our aging housing inventory, planning and design of future construction projects, and to partially fund the annual costs of operating, maintaining, and leasing housing units for military families. This request does not provide adequate resources to contain the growth of the revitalization backlog. TABLE 5 summarizes each of the categories of the Army Family Housing program and the percent of the total request for each category.

TABLE 5

ARMY FAMILY HOUSING
FISCAL YEARS 1992 AND 1993 BUDGET SUMMARY
FACILITY CATEGORY SUMMARY

	AUTHORIZATION			
	FY 1992		FY 1993	
FACILITY CATEGORY	($000)	%	($000)	%
New Construction	57,200	3.7	0	0
Post Acquisition Construction	74,980	4.9	58,240	3.9
Planning and Design	5,220	0.3	11,060	0.8
Operations	247,258	16.1	252,726	17.1
Utilities	321,602	21.0	326,684	22.1
Maintenance	467,207	30.5	448,159	30.4
Leasing	360,783	23.5	379,881	25.7
Debt Interest	50	<0.1	50	<0.1
Debt Principal	125	<0.1	127	<0.1
TOTAL	1,534,425	100.0	1,476,927	100.0

NEW CONSTRUCTION. Army policy directs that the first source for providing family housing will be the civilian community. The concept of the Variable Housing Allowance (VHA) supports this policy. At locations where off-post housing is not available, too costly, or substandard, the Army must take positive steps to provide adequate housing for military families. New construction is programmed only when these conditions exist and it is the most economical alternative.

In this budget, our construction program has been reduced to the highest priority locations. We are requesting 470 units at six locations in the U.S. Three locations, Fort Hunter-Liggett, California, Fort Irwin, California, and Oahu, Hawaii, are among the highest cost areas in the U.S. Over 99 percent of the construction program, 466 units, is requested for these three locations. At three other locations, we are requesting construction of replacement housing for senior enlisted (one unit) and general officers (three units). These units will replace facilities that are old and do not meet current standards for habitability and safety.

POST ACQUISITION CONSTRUCTION. The Post Acquisition Construction program consists of whole house renewals and upgrade of substandard units to contemporary standards. Due to the aging of our inventory, we must continue to place emphasis on this type of work. In doing so, we will protect the government's investment and provide long-lasting benefits to our soldiers and their families. Our investment in family housing improvements continues to play a large role in the revitalization of Army Family Housing. Over the past ten years, we have invested over $800 million in the housing inventory.

Specifically, this request will provide revitalization to approximately 2,450 units in FY 1992 and 1,100 units in FY 1993 at worldwide locations. Included in the request are whole house revitalization projects for 902 units in FY 1992 and an additional 454 units in fiscal year 1993. This request begins a new initiative to revitalize not only the housing unit, but the entire living environment of the military family. We call this the Whole Neighborhood Revitalization Program. This program will provide systematic upgrade and repair of the existing housing inventory, while concurrently improving neighborhood amenities. All projects recommended for this program are based on economic analysis and new construction standards. Whole neighborhood revitalization projects in the FY 1992 budget for 432 units are at Fort Bragg and Fort Hood, while the FY 1993 budget includes 618 units at Fort Bliss plus continuation of efforts at Forts Bragg and Hood.

OPERATION AND MAINTENANCE. The operation, utilities and maintenance programs comprise the majority of the FY 1992 and 1993 budget request, 68 percent in FY 1992 and 70 percent in FY 1993. The funding requested for these programs partially provides the Army's annual expenditures for municipal-type services and utilities; maintenance of the existing family housing inventory in order to protect the Army's investment; and provide overall stewardship of the family housing inventory. This does not include Deferred Maintenance and Repair (DMAR) work which was not completed in prior years due to insufficient funding. The FY 1992 and 1993 requests continue programs which were in effect during previous years and provide resources for 72 percent of our maintenance and repair requirements.

This budget fully funds the anticipated requirements for operations and utilities in FY 1992 and 1993. The request also continues funding for the installation, operation and maintenance of an Army-wide computer system, Housing Operations Management System (HOMES), which is improving many phases of housing management. Due to continued management emphasis and the impact of previously approved energy conservation projects, a reduction in energy consumption has been factored into the utilities request. Revitalization of old family housing units also provides savings in energy as quarters will be comparable to new construction standards. This budget supports the Army energy conservation goal of an .8 percent reduction in overall facility energy requirements. A continuing objective of the operation and maintenance program is the improvement of living conditions for military families throughout the world by accomplishing the annual maintenance and repair of our inventory. However, this budget request will not accomplish all the maintenance and repair work which is needed to meet this objective.

FAMILY HOUSING REVITALIZATION BACKLOG

Revitalization is replacement new construction, improvements, and major maintenance and repair work which is required to meet DoD criteria and was scheduled for accomplishment in a prior fiscal year, but could not be accomplished due to insufficient funding. Foreign currency losses and fiscal constraints since FY 1986 created funding shortfalls which resulted in a significant rise in this backlog. In the short-term, deferring projects is the least harmful way of meeting federal deficit reduction goals and paying for currency losses, but this deferral adds to the backlog of requirements and increases the rate of facility deterioration. The revitalization backlog will increase from $2.6 billion in FY 1990 to $3.3 billion by the end of FY 1993 due to insufficient funding. This impacts severely on our overall program goals.

LEASING

Another way of adequately housing our military families is the leasing program. The Army, working with local communities, is executing test programs approved under Sections 801 and 802 of Public Law 98-115. We are proceeding to realize a successful Section 802, Rental Guarantee, project for the Oahu Consolidated Family Housing Office, Hawaii. We believe we will be successful since we are targeting this project to the higher graded soldier. Our program includes domestic leases (Section 801 and temporary domestic), Section 802 rental guarantee housing, and foreign leases. The temporary domestic leasing program for FY 1992 and 1993 decreases slightly due to reductions at Griffiss AFB, in support of Fort Drum, New York. We have requested only $5,675,000 and $4,667,000 for temporary leases in FY 1992 and 1993, respectively. The Section 801 program requests $58,189,000 in FY 1992, for an average of 4,126 units to be occupied during the year. In FY 1993, this increases slightly to $65,372,000 for an average of 4,493 units.

The largest portion of this budget presentation is the foreign leasing program. For this program, we request $296,919,000 in FY 1992 and $309,842,000 in FY 1993. This will support an average of 23,665 and 23,428 units to be occupied during FY 1992 and 1993, respectively. The program continues to support execution of the Government Rental Housing Program (GRHP) in Europe. Under this program the Army leases directly with European landlords and pays all lease costs while our soldiers forfeit all housing allowances. The soldiers then stay in these leased units for their entire tour and are relieved of the high out-of-pocket expenses associated with renting on the economy in Europe. We found that soldier morale is improved and there is no additional cost to the government since monies that would have been paid in housing allowances from the Military Personnel, Army (MPA) account are now transferred to the housing leasing account. Also, the GRHP leases will help in the orderly reduction of soldiers in Europe by providing flexibility to Commanders to shift leases from location to location or cancel leases no longer required.

Our total leasing program request supports approximately 28,300 units in both FY 1992 and 1993 to satisfy requirements in the United States, Europe, Korea, and Panama. These are our high priority locations where providing flexible family housing solutions is essential to improving the quality of life of our soldiers.

HOMEOWNERS ASSISTANCE PROGRAM

The Army is the executive agent for the Homeowners Assistance Program. This program provides assistance to homeowners by reducing their losses incident to the disposal of their homes when the military installations at or near where they are serving or employed are ordered to be closed or the scope of operations reduced. The FY 1992 and 1993 request is for $84,000,000 and $85,000,000 appropriations. The accompanying request for authorization is the same.

This request includes known requirements prior to any additional base realignments and closures. The request will provide assistance to personnel at approximately eight locations that are impacted with either a base closure or a realignment of personnel resulting in adverse economic effects on local communities. The Homeowners Assistance Program is funded not only from the resources being requested in this budget, but is also dependent in a large part on the revenues earned during the fiscal year from sale of properties. Any additional base realignments or closures due to last year's base closure law will incur an additional requirement in the Homeowners Assistance Program. Additionally, in an effort to reduce costs of the program, the Army will undertake a pilot program to contract for the disposal of homes acquired under the Homeowners Assistance Program. In this manner, the effectiveness of private contracting within the Homeowners Assistance Program can be thoroughly tested.

SUMMARY

In summary, the FY 1992 and FY 1993 requests for authorization of appropriations for Military Construction Army, Army Family Housing and Homeowners Assistance Program are $2,469,725,000 and $2,521,727,000, respectively. The requests for authorization are $2,569,725,000 and $2,521,727,000 in FY 1992 and 1993. With approval of this request we will continue to: support national and defense initiatives, get equipment out of the mud, provide adequate housing for soldiers, work toward eliminating obsolete and deficient work areas, meet statutory and regulatory requirements, and repair essential facilities. This request will provide additional family housing and operate and minimally maintain the current inventory. The Homeowners Assistance Program request will also show our personnel that even in these times of change we will assist personnel who are adversely effected by our actions. Approval of this request will continue the efforts of the Army and Congress to support a revitalized facilities infrastructure needed to enlist and retain quality soldiers essential in this period of force structure changes and to maintain worldwide operational readiness and fighting capability. The FY 1992/93 MCA program, however, reflects the effect of a constrained resource environment. While the program will meet some of our highest priority, essential needs, it does not meet all of our construction requirements, and it will result in growing backlogs of maintenance and repair for both Army family housing and military construction.

PART II

MILITARY CONSTRUCTION, ARMY RESERVE

In fiscal year 1992, the Army Reserve construction program is characterized by a number of unique factors that magnify the challenge of meeting today's requirements. Reserve construction requirements differ from those of the Active Component because of the decentralized nature of the Reserve forces. Our Reserve centers must be located in or near the civilian communities where our citizen-soldiers live. Additionally, Reserve centers are generally smaller and more specialized, and they must be planned and constructed in areas of the country experiencing population growth as a result of migration trends away from the northeast and central states to the south and southwest. The Army Reserve does not bring recruits to large established bases, rather, we follow the people and the talent in order to optimize recruitment and mission accomplishment.

The existing Army Reserve physical plant inventory is in a sad state of repair. There are now approximately 1,700 centers and maintenance facilities owned or leased by the Army Reserve. Many of these facilities were constructed or acquired during an era in which very little equipment was issued to the Army Reserve, and we had only one or two full-time personnel working at each Reserve center. As a result, most Army Reserve centers do not have adequate space to support the storage and maintenance of equipment or to accommodate the additional full-time personnel now assigned to Reserve units. Our older facilities served us well at one time, but we have outgrown them and in some cases we have outlived them. The end result is a collection of facilities, some of which must be viewed not as symbols of the Army's efficiency and vitality, but rather as eyesores that send the wrong message to community leaders and discourage employer support of Reserve soldiers.

Another characteristic of the Army Reserve's facility posture is a large and growing backlog of known construction requirements. This backlog results from some of the factors already mentioned, e.g., age of existing facilities and growth and changes in the units that occupy them. In addition, you should be aware that during the last 10 years the Army Reserve experienced a 42 percent growth in end-strength from 185,000 to approximately 330,000. During the same period there were 1,182 Army Reserve unit activations and conversions. As a result, 60 percent of the Army's corps aviation, 97 percent of its civil affairs strength, 87 percent of its psychological operations capability, and 25 percent of its special operations forces are now found in the Army Reserve. Over the same 10 years, the dedicated procurement program has brought $880 million of new equipment to the Army Reserve. This measure has consequently generated construction requirements for additional storage and maintenance facilities. All of these factors have created a construction requirement backlog bill of approximately $2.3 billion. However, if proposed force structure modifications for the Army Reserve are actually implemented, this could well lead to reductions in the backlog even with the overall need remaining great.

We realize that rehabilitating or constructing new facilities everywhere is unrealistic, and that some inefficiencies and overcrowding will continue to occur. Because of the critical role facilities play in the retention and training of

Reserve soldiers, we will continue to give the improvement of our physical plant our highest priority.

During the preparation of the Chief, Army Reserve's Long Range Plan 1990-2020, we explored new visions on Army Reserve facilities acquisition and usage. This plan incorporates our concerns with the chronically low percentage of required Army Reserve facilities, keeping up with distinct demographic population changes and the accelerating costs of leasing facilities.

Two prime long-range plan objectives involve the concepts of Army Reserve regional training support hubs and metropolitan consolidated Reserve complexes.

Regional training support hubs will be located in areas where land and training areas are plentiful; located on or near existing Defense Department facilities/installations; have a capacity to house, feed, train, equip and maintain Army Reserve units over extended period of time. These regional hubs are primarily designed to support annual training, specialized training, equipment concentration sites and equipment maintenance needs.

Metropolitan consolidated Reserve complexes will be located in urban/suburban areas where people are plentiful; located in areas of emerging population growth or high Reserve component troop densities. These metropolitan complexes are primarily designed to support weekend training requirements and provide sufficient unit equipment storage capabilities.

Based upon an Army commitment to help resolve Army Reserve facility shortage problems, we have been working closely with the Total Army Basing Study (TABS) team reviewing proposed base closure and realignment alternatives. We are exploring opportunities for Army Reserve utilization of Defense Department facilities and installations and other federal properties in support of regional support hubs and metropolitan Reserve complexes.

We also work each year with the Commanders of U.S. Forces Command, U.S. Army Pacific Command and U.S. Army Special Operations Command to develop and prioritize future year construction programs. We take into account the total facilities requirements to adequately support the units in today's force structure, as well as in the future. As specific projects are developed, we work closely with the units involved to ensure the facilities meet their immediate needs and also provide for future expansion. This year, moreover, we will have the additional advantage of the newly created provisional U.S. Army Reserve Command, which is now being organized at Fort Gillem, Georgia, to help us more professionally manage our military construction program and optimize use of available financial resources.

The construction program that we present today for your consideration has been developed in the context of severely constrained resources. It will not meet all of our needs, but it will enable us to address a few of our highest priority construction projects.

FISCAL YEAR 1992 REQUEST: The FY 1992 request of $51.6 million is for the authorization of 12 major construction projects located in Puerto Rico and 9 different states. Specifically, the request is for:

(1) Construction of six new facilities including three Army Reserve centers, an equipment concentration site with area

maintenance support activity, a petroleum distribution system operational storage facility, and a separate area maintenance support activity.

(2) Alteration or expansion of six existing Reserve centers.

The projects were selected and ranked based on need, the mission of units supported, troop activation schedules, and the general contribution of each project to the readiness of the Army Reserve. Virtually all projects are at 65 percent design or more. We envision no difficulty in the award of all the projects during FY 1992.

Minor construction projects, and planning and design funds requested are $500,000 and $5,400,000 million respectively. The total cost of the projects contained in this authorization/ appropriation request is $57,500,000.

I encourage you to consider the future role of the Army Reserve and the need to address the construction backlog in the context of world and local developments. As we move toward the 21st century, our Country will experience an evolution toward a greater reliance of the Total Force on the Army Reserve and its sister Reserve Components to ensure freedom around the world. We expect this increased reliance to occur even in the face of structure changes that have been proposed. We must use our ingenuity to identify alternatives to reconfigure, revitalize, and construct a facilities infrastructure that will meet the future needs of the Army Reserve.

SUMMARY

While the uncertainties of the years ahead present many challenges, the men and women of the Reserve Components can and will continue to do the jobs and accomplish the missions to which they are assigned with professionalism, dedication and excellence. In these times of tight budgets, these citizen-soldiers, by virtue of their being part time, are the best bargain in the Department of Defense. Their superb performance in the Persian Gulf is a source of pride to us all, and Congress has our gratitude for the support it has given and continues to give them.

PART III

MILITARY CONSTRUCTION, ARMY NATIONAL GUARD

Next, I will present the Army National Guard's (ARNG) Military Construction Program for fiscal years 1992 and 1993.

MILITARY CONSTRUCTION PROGRAM REQUEST - FY 1992

The FY 1992 ARNG military construction budget request totals $50.4 million. This includes $43.0 million for major construction projects, $5.1 million for unspecified minor construction, and $2.3 million for planning and design. The requested program supports requirements from 19 States and will provide the following facilities for ARNG units:

FACILITY	NUMBER	COST
ARMORIES (NEW, REPLACEMENTS, EXPANSIONS)	3	$3,990,000
EQUIPMENT MAINTENANCE SHOPS	4	$10,893,000
TRAINING SITE FACILITIES	5	$ 9,655,000
TRAINING SITE RANGES	6	$ 5,575,000
AVIATION FACILITIES	3	$11,531,000
SUPPLY AND SUPPORT BUILDINGS	1	$ 373,000
TOTAL	22	$42,017,000

MILITARY CONSTRUCTION PROGRAM REQUEST - FY 1993

The FY 1993 request of $54.1 million includes $3.7 million for major construction, $5.5 million for unspecified minor construction, $11.5 million for minor new construction, $29.3 million for major repairs, and $4.1 million for planning and design. There are only three construction projects requested in this program.

FACILITY	NUMBER	COST
EQUIPMENT MAINTENANCE SHOPS	1	$ 2,800,000
TRAINING SITE FACILITIES	1	$ 500,000
AVIATION FACILITIES	1	$ 400,000
TOTAL	3	$ 3,700,000

The three ARNG projects requested are driven by environmental or Occupational Safety and Health Agency (OSHA) compliance requirements.

FACILITIES SUPPORT FOR CONTINUED IMPROVEMENT IN THE 1990'S

For the ARNG to maintain the high state of readiness developed during the 1980's and to continue into the 1990's, it is critical that resources in terms of manpower, equipment, and facilities must be maintained and intensively managed. Currently, the ARNG provides 43% of the combat force structure of the total Army force, including 10 of the 28 combat divisions. All of these forces will be used in their wartime missions to support the Commanders-in-Chief (CINC's) when called upon.

FORCE STRUCTURE: With the probability of mission changes being directed in the ARNG in the future, facility requirements of the ARNG will need to be closely evaluated to ensure available and adequate facilities can support unit reorganizations and redistribution of units. Increases in end strength and changes in the force structure over the past decade severely overtaxed the existing armory inventory, resulting in a backlog requirement of $767 million to correct deficiencies at about 455 armories. This represents only the most urgent needs of the total armory backlog because it does not include requirements to modernize obsolete armory facilities caused by aging or constraints to expansion.

READINESS AND EARLY DEPLOYING UNITS: Adequate facilities are essential to improve training, availability of equipment, and readiness as was shown by the ARNG units supporting OPERATION DESERT STORM. Our construction requests include only a portion of the projects to provide the modern facilities necessary for conducting realistic, mission oriented training; for sustaining MOS proficiency; and maintaining the new equipment distributed to the ARNG.

TRAINING: Currently, the ARNG backlog of training related and live-fire weapon range requirements total 313 projects with an estimated cost of $445.8 million. Our request includes Modified Record Fire, Automated Record Fire, Multipurpose Machine Gun, and Known Distance ranges.

--*PERMANENT TRAINING SITE FACILITIES:* In order to sustain year round training at our major training sites, permanent cantonment facilities (troop barracks, dining and support buildings) must be provided to supplement or replace the WW II wooden buildings, metal hutments, tent platforms and unheated facilities currently available. Additionally, the dedicated military education facilities will provide the ongoing necessary classroom and field environment to continually develop and improve future leaders for the ARNG. Our FY 1992 request includes 7 training site support projects for an estimated cost of $9.9 million and 6 weapons ranges at $5.6 million. The FY 1993 request includes one environmental compliance project at $500,000.

--*REGIONAL TRAINING CENTERS:* In partnership with the Active Component and the Army Reserve, the ARNG is establishing regional training sites to provide specialized training not available at home station. These include the Regional Training Site - Maintenance, the Regional Training Site - Medical, and other specialized training on a regional basis. Our FY 1992 request includes a Regional Training Site - Maintenance in Pearl City, Hawaii.

--*RANGE MODERNIZATION:* Our range modernization initiative, incorporating range concepts, state-of-the-art target systems and training doctrine developed by the Army, is continuing. The ARNG range program has been developed to modernize our training sites as a means to standardize the type and quality of training. The systems employed at our major training sites are more complex and more costly to construct than the older fixed position ranges common to our older training sites. These new ranges will permit us to train more troops in less time and result in improved weapons marksmanship. Our goal is to provide modern ranges that can accommodate the individual soldier through combined arms training opportunities for our combat units. Our FY 1992 request includes six weapons ranges for an estimated $5.6 million.

--*EQUIPMENT READINESS:* The Department of the Army continues to deliver large quantities of equipment to the ARNG under the force modernization program to include the Hawk Air Defense System, Multiple Launch Rocket System, M-1 Tanks, Bradley Fighting Vehicles and Heavy Expanded Mobility Tactical Trucks.

Requirements to maintain and manage this equipment in a go-to-war state of readiness places greater demands on our surface maintenance support. We are meeting this challenge by systematically improving and modernizing our maintenance facilities. The new maintenance facilities have larger workbays to handle the larger sized equipment, and more supply rooms and equipment parking areas. In addition, these improvements are enhancing the quality of life for the full-time work force by providing efficient, well lighted work areas, properly equipped and environmentally sound facilities. New equipment wash platforms and consolidated storage areas at our training equipment sites are reducing the time required for turning in the equipment used during weekend and annual training sessions. Our FY 92 request includes 4 maintenance facilities for an estimated $10.9 million and one maintenance facility for FY 93, estimated $2.8 million.

AVIATION SUPPORT FACILITIES: The two FY 1992 projects we are requesting will permit us adequate space to safely park all assigned aircraft and provide separate maintenance hangar space in order to maintain the aircraft assigned. The FY 1993 Joint Use Aviation Fuel Point project at Montgomery, Alabama is requested to bring us into compliance with environmental requirements. Neither the FY 1990 nor FY 1991 program included requests for constructing or replacing any aviation support facilities because the Army's Aviation Modernization Plan (AAMP) was being finalized for recommended realignments in aircraft types and unit structure for both the Active and Reserve Component. However, the AAMP is now completed and we are proceeding with our aviation modernization program. Our combined FY 1992/1993 request includes three aviation support facilities for an estimated $11.5 million.

SUMMARY

The Army National Guard continues to be an important part of the Total Army Force and the ARNG participation in OPERATION DESERT STORM is indicative of that. Facilities constructed during the last decade played a major role in meeting force structure changes, accomplishing realistic and quality training, maintaining readiness and improving the quality-of-life for our "Citizen-Soldier." With the current rate of replacement of about 100 years, the facilities we are using today will become obsolete before we can modernize them. Most of the projects requested in our program are to modernize, replace, or bring into environmental compliance, existing inadequate facilities. We are addressing the problem of construction backlog reduction, but priority must be given to unit mission and readiness. Our modest construction request for FY 1992 and FY 1993 has been designed to address our highest priority requirements that will continue to improve the Army National Guard in the 1990's.

PART IV

BASE REALIGNMENT AND CLOSURE (BRAC)

Next, I will discuss the status of Base Realignments and Closures within the Department of the Army. This issue is clearly of considerable importance to the Army as well as to this Committee, and I appreciate the opportunity to report on the Department of the Army's progress.

DEFINING ARMY BASE REALIGNMENT AND CLOSURE (BRAC) INITIATIVES

To begin, I believe it would be useful to recap the various Base Realignment and Closure initiatives currently underway in the Army. Today, the Army is working on four "rounds" of realignments and closures, and for sake of clarity and reference, we have revised the terminology: we now refer to the various iterations as Base Realignments and Closures (BRAC) I, II, III, and BRAC 91. The distinctions are as follows:

BRAC I - BRAC I refers to the realignments and closures resulting from the 1988 Commission as codified in PL 100-526. The Commission's recommendations, as they affected the Army, required that the closure of 76 installations (including 53 stand-alone housing sites) and realignment of 57 other Army installations be completed by 30 September 1995. The Commission's recommendations were based on requirements as projected in 1988 and assumed that "the force structure would retain the size and configuration outlined in currently approved plans." Although that assumption has not proven to be the case, the Commission's recommendations nonetheless implemented a long overdue streamlining of the installation structure of the military services. And, for the most part, their recommendations do not complicate subsequent additional realignments and closures. This is because the Commission focused on the installations themselves and their utility and not on force structure. Their mission was to clean-up a decade long hiatus in realigning military installations whose usefulness the Commission felt could not be sustained. One might disagree with the Commission's site specific judgments of an installation's particular utility or the effectiveness or cost efficiency of certain realignments, but their overall recommendations essentially provided the services with a clean baseline from which to move forward to restructure the installation needs of what now portends to be dramatically altered troop levels. A list of the PL 100-526 Army Closures and Realignments is found at TABLE 1.

BRAC II - BRAC II refers to the Service Secretaries' proposals for additional realignments and closures as announced by Secretary Cheney on 29 January 1990. While the 1988 Commission's recommendations (or BRAC I) essentially rationalized the military service's installation structure to align it with known requirements in 1988, BRAC II reflected the Army's initial transition into a smaller force and streamlined organization as reflected in the Army's FY 1991 budget submission and as necessitated by changes in the threat environment and fiscal realities. It needs to be emphasized that BRAC II did not reflect and was not intended to reflect the dramatic escalation in the pace of change in Eastern Europe which occurred following the fall of the Berlin Wall on November 9, 1989. Rather, the FY 1991 budget and BRAC II were the mid-term transitions into the smaller force now reflected in full scope in the FY 1992/1993 budget submit. BRAC II reflected a reduction of the Army's force from a 5-corps, 28-division force to a 4-corps, 23-division force. BRAC II also did not include any OCONUS realignments or closures because of the uncertainties then associated with the ongoing Conventional Forces Europe (CFE) Treaty negotiations. As a transitional initiative, BRAC II proposed closure or layaway of twelve additional Army installations and recommended realignments which could have affected up to 134 other Army activities.

A listing of the original BRAC II proposals for additional Army closures and realignments is shown at TABLE 2. You will note that six of these proposals are crossed out. This is because PL 101-510, the National Defense Authorization Act for FY 1991, restricted the Department's authority to continue those base realignment and closure proposals announced on January 29, 1990, where the thresholds established by 10 U.S.C. 2687 are breached. For the next five years, the Defense Base Closure and Realignment Act of 1990, a part of PL 101-510, is now the exclusive base closure and realignment process for any closure of an installation employing 300 or more full-time permanent civilians or the realignment of any activity where 1000 or 50% of the installation's full-time permanent civilians are impacted. These new procedures halted the Army's studies associated with BRAC II proposals to close Fort Ord, California; Fort McClellan, Alabama; and the Sacramento Army Depot, California. Other studies stopped included the BRAC II proposals to eliminate the Troop Support Command (TROSCOM), Missouri; realign the Red River Army Depot, Texas; and place Fort Gillem, Georgia, in a semi-active status. All six of these previous BRAC II proposals trigger the thresholds of 10 U.S.C. 2687, and therefore are subject to the new Base Realignment and Closure process mandated by PL 101-510.

Studies, however, are continuing for the remaining BRAC II proposals announced by the Secretary of Defense on 29 January 1990. Final decisions have been made on some of the proposals and they are being implemented. The status of the remaining BRAC II studies of base closures and realignments has been included in subsequent parts of this statement.

BRAC III - At the time that the BRAC II proposals were announced, Congress expressed concern that the proposed installation closures and realignments did not include OCONUS installations. OCONUS installations were not included in BRAC II because at that time CFE Treaty negotiations were expected to cover European force structure. Subsequently, force structure was removed from the CFE Treaty which now only covers the reduction of certain types of military equipment.

As a result, on September 18, 1990, Secretary Cheney announced the drawdown of forces at 150 overseas military sites, in 44 locations, in ten countries, ranging from small installations to major bases. For the Army, the September 1990 announcement included closure or reduction of operations at 113 Army facilities overseas (99 sites in Germany, 2 in Greece and 12 in Korea). These OCONUS announcements subsequently became known as BRAC III and follow-on OCONUS closures and realignments will continue with this terminology. Subsequently, on April 12, 1991, 12 installations comprising BRAC III, Round 2 and 15 installations comprising BRAC III, Round 3 were announced.

Just as BRAC II was the initial transition to a smaller force in CONUS, BRAC III was the initial transition to a smaller force overseas. Additional OCONUS closures, beyond the original September 1990 and April 1991 announcements, may occur in reflection of the continued drawdown of military forces overseas. A listing of the Army OCONUS BRAC III sites is found at TABLE 3.

BRAC 91 - Public Law 101-510, the National Defense Authorization Act for FY 1991, established a new process for DoD Base Realignment and Closure actions which will govern all future DoD recommendations through the year 1995. Implementation of the first phase of this new process is called BRAC 91.

The new process applies only to closures or realignments that trip the thresholds of 10 U.S.C. 2687. These thresholds are reached when the installation proposed to be closed is authorized to employ at least 300 direct-hire, permanent civilian personnel, or where a proposed realignment of an installation that is authorized to employ at least 300 civilians would be reduced by more than 1000, or by more than 50% (whichever is less) in the number of authorized civilian employees. The new Act directed the formation of an independent Defense Base Closure and Realignment Commission to review base realignment and closure recommendations made by DoD during the next five years. The Service's recommendations are to be based on a force structure plan submitted as part of the FY 1992/94/96 budgets as well as selection criteria which must be published in the Federal Register, receive public comment and be submitted for Congressional review. The legislation requires the Commission to convene only in calendar years 1991, 1993 and 1995 (hence, the terminology of BRAC 91, BRAC 93, BRAC 95) to assess and evaluate base realignment and closure recommendations from all services and to forward their recommendations to the President and eventually to Congress for approval. The Commission will conduct public hearings on the DoD recommendations and may make revisions if the recommendations deviate from the submitted force structure plan and final criteria.

As noted previously, this new legislation also required the Army to cease all BRAC II major realignment and closure actions that would impact individual installations beyond thresholds established in 10 U.S.C. 2687. Consequently, the Army withdrew all BRAC II realignment and closure proposals that exceeded those thresholds. All future proposals that breach the 10 U.S.C. 2687 limits will be referred to the new commission established by the legislation. The new legislation does not, however, affect the execution of base closure initiatives mandated under Public Law 100-526 (BRAC I), FY 1991 proposals (BRAC II) that do not exceed 10 U.S.C. 2687 thresholds, or those which occur outside the continental United States (BRAC III).

The Army is currently implementing the new process. The BRAC 91 recommendations announced on April 12, 1991 reflect the force structure plan submitted by the Secretary of Defense for the armed forces as part of the FY 1992/93 budget submissions. The Administration's FY 1992/93 budget request is the first of three biennial budgets which comprise the Defense Department's comprehensive FY 1992-97 future years Defense Program. While the FY 1991 budget submission was in many ways a transition budget, the FY 1992/93 request supports the six year Defense Plan for the capabilities required of the new U.S. Defense strategy discussed by Secretary Cheney and General Powell in hearings. The FY 1992/93 budget request reflects the goal to streamline and restructure America's armed forces in order to provide the capabilities needed within projected fiscal constraints. The budget request also reflects continued Defense management initiatives to ensure sustainment of the current high quality and capabilities of the U.S. forces in an era of increasingly scarce resources. The BRAC 91 Base Closure and Realignment recommendations reflected these restructurings of the armed services.

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With this backdrop of the various Base Realignment and Closure initiatives underway in the Army -- BRAC I (PL 100-526), BRAC II (29 January 1990 proposals), BRAC III (overseas), and BRAC 91 (PL 101-510 report submitted April 12, 1991) -- the following sections will discuss the various initiatives underway in the Army to restructure its smaller force and provide an update on implementation of each of the "BRAC" initiatives.

RESHAPING THE ARMY

RESHAPING FORCE STRUCTURE. The Army stations forces to support the national military strategy. The national military strategy drives the size and mix of the Army, which, in turn, dictate the size and types of installations the Army must maintain to ensure a trained and ready force. Changes in the U.S. national military strategy, caused by the dramatic changes in Eastern Europe and the Soviet Union and a concomitant reduction of budget resources for national defense, will result in a smaller, more U.S. based total Army (Active and Reserve Components). However, world events certainly could reverse this trend.

Significant reductions in the size and composition of the Army are programmed to occur in both CONUS and OCONUS over the next few years. As these reductions are made, the Army will need to reduce its basing structure as well. Last year, the Army's planning was focused on reducing the size of the Army from a 5-corps, 28-division force to a 4-corps, 23-division force by the mid-1990s. The budget targets agreed to in last year's budget summit agreement with Congress, however, necessitated further reductions. Army plans now reflect a build-down to a 4-corps, 20-division force by the mid-1990s. To put this in perspective, BRAC I (1988) envisioned an Army force structure end state in the mid-1990s of 781,000. BRAC II (January 1996) envisioned this structure to be 630,000. And now, BRAC 91 will reflect a projected Army Active Component end state in the mid-1990s of 535,000.

As the force and attendant funding continue to shrink in response to developments in the international security environment, so must the installation structure if we are to maintain quality facilities and work environments for our soldiers, civilian employees and family members now and in the future. Accordingly, as the Army reshapes, the installation base also must be reconfigured and reduced.

RESHAPING ARMY SUPPORT ACTIVITIES. As the Active and Reserve Component force structure of the Army are reduced, Army support activities also must be streamlined and reduced to achieve management efficiencies and reflect the changed Army force structure. A number of initiatives have been undertaken to reshape Army's support activities. Together they represent a major institutional effort to enhance productivity and quality through elimination of management layers, elimination of functions that do not add clear value and consolidation of related functions where it is effective to do so.

For instance, functional experts from the Army Staff and major field commands were brought together during the past year under an Army initiative called PROJECT VANGUARD to review missions, functions and organizational structures of all Army support (less combat/combat service support) activities. Included in the review were headquarters, Department of the Army staff, major command headquarters, field operating agencies and Active/Reserve Component support units worldwide. A broad range of initiatives was recommended to the Army leadership for consideration. These included activity and headquarters reductions, consolidations, relocations, disestablishments, as well as mission redistributions to other headquarters and agencies.

PROJECT VANGUARD completed its review in December 1990 and its implications in terms of base closures and realignments are being assessed. The procedures and processes established by the Defense Base Closure and Realignment Act of 1990 will be followed should the threshold of 10 U.S.C. 2687 be breached by any of the streamlining initiatives. A listing of PROJECT VANGUARD approved initiatives to date is found at **TABLE 4**.

The **DEFENSE MANAGEMENT REVIEW** (DMR) and many associated management improvement initiatives also continue to be implemented to consolidate DoD services and streamline staffs. The affected areas include logistics, information management, training, personnel management, research, development, engineering and financial management. As with PROJECT VANGUARD, the implications of these changes are being carefully assessed in terms of the requirements of the Defense Base Closure and Realignment Act 1990. Continuing fiscal constraints require that we enhance productivity and efficiency and reduce our support costs.

In addition to the DMR and PROJECT VANGUARD, all Army commanders are charged with the inherent responsibility to maintain an efficient and effective organization to accomplish their assigned mission. Faced with fundamental reductions in force structure and support activities imposed by higher headquarters, as well as continuing fiscal constraints, commanders of Army major commands have taken the initiative and proposed additional economy measures and reorganizations, restructurings and consolidations. Unfortunately, many of these measures have made their way into the press prior to their full consideration or approval by the Army's leadership. Today, we can only add assurances that as the Army draws on its collective wisdom to restructure and build down its force, we will fully follow the processes established by the Congress. The pressures to reshape and reduce the Army are clearly evident. The need to close and realign additional Army installations to reflect the new Army structure is also clearly evident. The questions of where and how many, however, are still to be answered. The impacts will be traumatic wherever closures occur or organizations and their associated jobs are realigned. We ask for your support as we continue with the difficult task ahead. Building down the Army by 25-30% as current budget realities require, while maintaining its superb quality as so proudly demonstrated in DESERT SHIELD/DESERT STORM, pose challenges for all of us.

PRINCIPLES GOVERNING ARMY BASE REALIGNMENTS AND CLOSURES

The smaller Army dictated requires less infrastructure; it is as simple as that. In some instances, fewer bases will be needed because we are inactivating full divisions. In some instances, installations may need to be closed or realigned to reflect reductions in, or consolidations of, maintenance or training workload or consolidations and streamlining of other Army support activities. We are proud of all of our installations, and they all have contributed greatly to the quality Army we have today as well as benefitted from enhancements to their infrastructure in recent years. There are no easy choices.

To assist in making these tough decisions, however, we are guided by a number of basic principles. In summary form these are:

- *Maximize readiness with installations capable of generating, projecting and sustaining combat power in support of national military objectives.*
- *Consolidate into our best, most efficient facilities.*
- *Maximize quality of life and minimize hardships for our soldiers, their families and civilian employees.*
- *Provide for appropriate expandability and reversibility to ensure an installation base capable of responding to future force structure requirements.*
- *Provide for adequate mobilization capability to train and mobilize as called for by various military contingencies.*
- *Provide for adequate training land to sustain a trained and ready force.*
- *Consider the costs and savings of proposed realignments and closures.*
- *Consider the economic impact on communities.*
- *Consider environmental impacts, restoration and costs of proposed realignments and closures.*

For BRAC II and BRAC III, these were our guiding principles. For BRAC 91, these principles are reflected in the selection criteria published in the Federal Register on both November 23, 1990, and February 15, 1991.

COMMITMENT TO BASES PROPOSED FOR REALIGNMENT OR CLOSURE

The Army is keenly aware of the inherent hardships which accompany Base Closures and Realignments not only to our own soldiers, civilians, and their families, but also to the surrounding communities and states in which these installations are located. We are committed to mitigating these hardships to the maximum extent possible.

EMPLOYEES. To help partially alleviate the hardships in this process, the Army will continue to be sensitive to the needs of the workforce at all affected installations. We fully understand the dilemma facing each civilian employee. It has been long-standing Army policy to provide placement assistance and to make all reasonable efforts to fund continued employment for its affected employees.

Army civilian employees who lose their jobs as a result of base realignments or closures will be given priority rights to other vacant positions in DoD and in other Federal agencies. They also will be given assistance in locating jobs in private industry if they so desire. The Army cooperates with the Department of Labor and state employment services to enhance the assistance given to employees who desire to relocate to new positions outside of DoD.

The **DoD PRIORITY PLACEMENT PROGRAM** provides the principal mechanism for placing affected employees within DoD. Through the program, the skills of displaced employees are matched with vacant positions as they occur at other activities throughout DoD. If the new job involves a move to another location, the costs of moving the employee are borne by the Government. If the new job is at a lower grade level, the employee's pay is saved to the maximum extent permitted by law.

For those employees who cannot be placed or who wish to remain in their present geographic area, the local personnel office will assist in finding local employment. Additionally, the Office of Personnel Management administers a displaced employee program to assist in placement with Federal agencies.

Another benefit program is the **HOMEOWNERS ASSISTANCE PROGRAM (HAP)**. The Army is the Department of Defense's Executive Agent for implementation of the Homeowners Assistance Program. It is a special relief program for both military and civilian Federal employees funded by both appropriated and non-appropriated funds. It applies when soldiers or employees are unable to sell their homes in a depressed real estate market due to a base closure or realignment announcement either in the U.S. or overseas. Public Law 101-189 authorized the transfer of $31 million ($20 million for FY 1990 and $11 million for FY 1991) from the DoD Base Closure Account into Homeowners Assistance Fund. This was accomplished by establishing a separate Homeowners Assistance Account with a two-year life for BRAC I requirements. We have submitted a legislative proposal which would eliminate the expiration date on these BRAC I funds. This would greatly simplify fund control procedures. The Homeowners Assistance Fund is a revolving fund -- retaining revenue to finance future requirements. We ask for the committee's support on this proposal.

The fund balance for the overall HAP in FY 1991 is $37.9 million, which includes carryover from FY 1990 appropriation and mortgage assumption authority for FY 1991 and the transfer of $11 million from Base Closure. Our 1992 budget request is $89 million and $90 million for FY 1993, which includes $5 million mortgage assumption authority in both FY 1992 and 1993. To date, only two BRAC I sites (Chanute AFB, Illinois, and Pease AFB, New Hampshire) have qualified for HAP; however, real estate impact studies continue at BRAC I and BRAC II sites and all will continue to be monitored. Any new reductions and closures stemming from the Commission established by the Defense Base Closure and Realignment Act of 1990 will likely place additional funding requirements on the Homeowners Assistance Program. At TABLE 5, an information paper is provided which explains the Homeowners Assistance Program in more detail.

ECONOMIC REUSE OF CLOSED OR REDUCED BASES. Of paramount importance when facing base realignments and closures is to help mitigate the impact on the affected state and local communities. The very words "base closure" incite the full range of emotions from anger to fear to uncertainty for both Department of Defense personnel and the local community. Rarely does it instill a sense of opportunity. Based on historical experience from previous base closures, however, we know such opportunity indeed exists. This negative perception can and must be turned around but to do so will require an intensive campaign by local communities to "market" the positive possibilities for base reuse by other Federal agencies, state and local governments, and most especially the private sector. It is significant to note that over the past 25 years, many communities have very successfully converted former military bases to both public and private enterprise uses. We recognize such successes are easier in some places than others, but nonetheless, demonstrate that a base closure does not necessarily spell long term economic doom. The Army is committed to working with local communities to establish broad-based reuse organizations and to work with that organization on innovative ways to reuse closed or layed away bases to create jobs. Handled without organization, base closure and realignment actions can have a devastating effect. This negative impact must be prevented, and Army and Defense, through its Office of Economic Adjustment (OEA), will continue an all out effort to form a partnership with local community reuse organizations to achieve successful reuse transitions.

To date, reuse planning grants from OEA have been made to broad based local community reuse committees organized by citizens, towns, cities and counties around the following BRAC I and BRAC II installations:

INSTALLATION	STATE	AMOUNT($)
Lexington Army Depot	Kentucky	100,000
Fort Dix	New Jersey	67,000
Fort Sheridan	Illinois	255,000
Mississippi Army Ammo Plant	Mississippi	70,000
Fort Hood	Texas	80,000

In the unique case of the Presidio of San Francisco, California, which will transfer to the National Park Service and become an addition to the National Park System, the Army has transferred one million dollars to the National Park Service to facilitate their planning for a smooth transition of the installation from Army management to National Park Service management. Additionally, the Army has committed $223,000 to determine the requirements for, and the economic consequences of, lease-back arrangements with the National Park Service. These actions are in compliance with the 1990 Defense Appropriations Act Conference Report requirements on the Presidio of San Francisco.

ENVIRONMENTAL COMPLIANCE AND RESTORATION: *CONUS*. The Army is fully committed to compliance with all environmental statutes. In FY 1991, The Army anticipates expending over $1.3 Billion for Army-wide environmental compliance and restoration, including Army's Civil Works Program. In order to comply with the National Environmental Policy Act (NEPA) in executing base closure and realignment recommendations, the Army will publish Environmental Impact Statements (EISs), Environmental Assessments (EAs), Programmatic Environmental Assessments, or Records of Environmental Consideration (REC), as appropriate.

The Army is conducting studies in accordance with its Installation Restoration Program (IRP) to identify contamination at installations that will be closed. The existing protocol has been expanded to include asbestos, PCBs and other contamination not normally investigated as part of the IRP. The essential steps of the Army's IRP are:

- *Preliminary Assessments/Site Inspections (PA/SI).* This step examines existing documentation on an installation for evidence of any handling, treatment, storage or disposal of hazardous materials/wastes. Interviews will be held with past employees to supplement documentation and a visual inspection of the site takes place.

- *Remedial Investigation/Feasibility Study (RI/FS).* If the PA/SI step concludes that hazardous materials/wastes might have been handled, treated, stored or disposed on the installation, then samples of soil, surface water and ground water will be taken and analyzed to confirm or discount any contamination. If contamination is confirmed, the Feasibility Study will analyze alternatives for remediating the contamination.

- *Record of Decisions (ROD).* This formal document selects the alternative among those analyzed in the Feasibility Study as the methodology to remediate the site.

- *Remedial Design/Remedial Action.* This step performs any design necessary and implements the selected alternative to remediate the site.

- *Statement of Condition.* This document is prepared by the U.S. Army Toxic and Hazardous Materials Agency and provides an environmental condition of property that is being considered for disposal.

The Army will ensure that environmental contaminants, either migrating in the groundwater or present in the soils, are treated, contained, eliminated, or managed to comply with human health or environmental standards. The Army's clean-up goal is to accomplish land disposal actions with no restrictions on the property's future use.

The Army will also consider, on a case-by-case basis, if potential non-Army future land uses exist that are compatible with existing land use. Where appropriate, these properties may be disposed of to other Governmental agencies with restrictions placed on their future use. Such a disposal will not take place where an unacceptable human health or environmental hazard would exist. A final decision would only be made after the environmental conditions have been assessed.

If transferred to another Federal agency, the Army will take the lead for all restoration studies and investigations. Who pays for the actual clean up will be negotiated between the Army and the gaining agency.

ENVIRONMENTAL COMPLIANCE AND RESTORATION: *OCONUS.* The Army has developed an OCONUS environmental restoration protocol for application at those sites to be vacated and returned to the host country. There is no Base Closure Account or Defense Environmental Restoration Account available to fund OCONUS closures. Consequently, environmental restoration overseas is funded from the Army's Operation and Maintenance Account.

Facilities being returned to the host nation are being screened to ensure that any problems requiring Class I projects are identified and funded. Class I projects are those that are necessary to protect against imminent danger to human health or the environment or that are necessary to meet substantive U.S. Federal or host nation law. When the installation is being prepared for turnover to the host nation, Class I actions that are known but have not yet been corrected will be made known to the host country.

Hazardous materials and hazardous waste will be removed and properly disposed of prior to the joint U.S./host nation inspection.

Finally, an Environmental Status Report (ESR) will be prepared for each installation that is to be turned over to the host nation. The ESR will document the environmental conditions at the installation and will be developed from known information, and generally not through new studies. The ESR would also contain a determination of the significance of the environmental impacts associated with the turnover of the installation to the host nation, and whether any further analysis must be prepared in connection with the installation turnover. The ESR would be used by U.S. negotiators during residual value negotiation with the host nation.

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The remaining sections of this testimony provide a status report on Army's implementation of each of the Base Realignment and Closure (BRAC) initiatives -- BRAC I, BRAC II, BRAC III and BRAC 91.

BASE REALIGNMENT AND CLOSURE I (BRAC I): IMPLEMENTATION STATUS

BRAC I OVERVIEW. On December 29, 1988, the Congress and the Department of Defense entered into a new era of cooperation in the ongoing effort to streamline the daily operations of the Department and to increase its operating efficiency. I am glad to report to you that this initiative is progressing smoothly and on-track. Implementation of the Commission's recommendations will affect 133 Army installations. Seventy-six installations, including 53 stand-alone housing sites, will be closed. Seven installations, which will not be closing, will both lose and gain activities. Six installations will lose activities while 44 will gain activities. You can see by the sheer number of installations involved that the Army has a tremendous challenge before it. Nevertheless, the program that I am presenting today, which updates that presented last year, will accomplish all the relocations within the statutory time limit while minimizing costs and maximizing savings.

In terms of actual realignments and closures to date, we have closed or transferred operations from 36 stand-alone housing sites, initiated the realignment of the training mission out of Fort Dix, New Jersey, and are nearing completion of virtually all the environmental documents required to execute the remainder of our initiatives. With respect to the 53 stand-alone housing sites, 51 of the sites have been screened within DoD, other Federal agencies, providers of homeless services and state and local governments. One property (stand-alone housing site at Dorseyville, PA (Pitt 03) - 11 1/2 acres/16 housing units) was sold at public auction on September 22, 1990, for $488,000, representing our first BRAC I property sale. We also are in the middle of negotiated sales with state or local governments at 15 sites; executed three leases to homeless providers and are in lease negotiations at six other sites per the McKinney Act; have permitted 12 sites to the Coast Guard and four to the Navy; and will auction six sites later this year. As in the past, the guiding tenets in developing our program have been to minimize adverse effects on personnel and to move no activity before adequate facilities are available to support and house them.

BRAC I FINANCIAL SUMMARY. The financial summary of the Army's BRAC I program is shown at **TABLE 6**. One-time implementation costs during the period FY 1990-199 total $1,710 million, an increase of $242 million from the FY 1991 President's budget. Included in this increase is $308 million that has been transferred from the DERA and OMA accounts for environmental restoration at BRAC I sites. If this transfer had not occurred, the one-time implementation costs would be $66 million less than the FY 1991 President's budget. The reduction in costs is due principally to a reduction in construction requirements to support the transfer of the initial entry training mission from Fort Dix and the production acceptance testing mission from Jefferson Proving Ground, and the assumption that the 29 January 1990 (BRAC II) proposal to inactivate the Headquarters, 4th U.S. Army would be approved. Savings during the same period, primarily due to elimination of 2,269 military and 3,657 civilian personnel, total $753 million, the same as last year's budget. Proceeds from land sales are anticipated to be $545 million, $464 million less than last year. This reduction is due to the legislation that requires the Department to convey 7,600 acres at Fort Meade to the Department of the Interior without consideration, leasing eight stand-alone housing sites to homeless providers under the provisions of the McKinney Act, and a reduction in the estimated value of Cameron Station based on a highest and best use study. Therefore, the net cost to the Base Closure Account (FY 1990-1995) to implement all BRAC I closures and realignments is programmed to be $412 million. This represents an increase of $706 million over what we projected for the same period last year. Recurring savings are estimated to be $264 million per year starting in FY 1996.

The Army requests $341.7 million of the $633.6 million requested by OSD in the BRAC I Base Closure Account funding for FY 1992. our projected requests for FYs 1993 and 1994 are shown at **TABLE 6**. As with our FY 1990 and FY 1991 programs, the majority of this request, $186.3 million, is for construction of facilities at gaining installations. A significant portion, $121.7 million, is for environmental restoration activities. The remaining portion of our request will be utilized to:

- *Move personnel and equipment.*

- *Manage real estate and information management area actions.*

- *Purchase and install information systems equipment in new and renovated facilities.*

Savings during FY 1992 result primarily from the closure of 15 additional stand-alone housing sites and the resulting avoidance of operation and maintenance expenses. Savings also accrue from elimination of military and civilian personnel.

What is now evident is that anticipated revenues from the sale of real property will probably not meet the expectations of the 1988 Commission. Leases to providers of services to the homeless; discounts on sales to state and local governments where the sales will result in housing for transitional or low income families; special legislation involving no cost transfers enacted on properties at Fort Meade and at Fort Douglas, are some of the factors contributing to lower expectations. Other legislation is pending on the Fort Sheridan property. Although these actions are based on meritorious considerations, they undermine the opportunity to generate needed revenues, while we continue to be encumbered with all of the costs associated with these transfers, including surveys and environmental clean-ups.

BRAC I ENVIRONMENTAL COMPLIANCE. Whether a base remains for active Army use or is closed or realigned, the Army is fully committed to compliance with all environmental statutes. To comply with the National Environmental Policy Act in executing the 1988 Commission's BRAC I recommendations, the Army will publish 12 Environmental Impact Statements (EISs), 14 Environmental Assessments (EAs) and one Programmatic Environmental Assessment. Completion dates for these documents are shown in TABLE 7.

The Army programmed approximately $28 million in FY 1990 on BRAC I environmental clean-up and plans to spend over $50 million in FY 1991. All of the enhanced Preliminary Assessments of BRAC I sites have been completed and we are starting the remedial investigations and feasibility studies.

The Army has complied with the Congressional directive to make the BRAC I Base Closure Account the exclusive source of funding for environmental restoration of BRAC I Base Realignment and Closure properties during the execution period. Estimates for clean-up of base closure sites are shown in TABLE 8. These are reasonable estimates based on currently known information. As we complete remedial investigation and feasibility studies under our installation restoration program, these estimates will be refined. Prior to FY 1991, BRAC I environmental costs were funded from either the Defense Environmental Restoration Account (DERA) or Army's Operations and Maintenance Account. For FY 1990, we programmed $6.866 million from DERA and $21.35 million from Army's Operating and Maintenance funds for BRAC I sites. These dollars are reflected in the current estimate of $308 million for FY 1990-1995.

BRAC I confronted the Army with a variety of difficult environmental challenges. At the Army Materials Technology Laboratory, Watertown, Massachusetts, we have the issue of decontamination and decommissioning of a research nuclear reactor. At Jefferson Proving Ground, Madison, Indiana, we have the issue of potential unexploded ordnance from testing that has occurred since 1941 of high explosive projectiles and other munitions items. At Pueblo Depot Activity, Colorado, and Umatilla Depot Activity, Hermiston, Oregon, we have the issue of stored chemical munitions. The point I want to make is that each clean up site is different and unique and will challenge our capability and ingenuity to find acceptable and economical solutions.

Compliance with Section 106 of the National Historic Preservation Act for all BRAC I properties also has been initiated. A programmatic agreement among the Department of the Army, the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers has been executed in an effort to streamline historic preservation review for BRAC I properties. The Army is committed to the preservation and protection of the significant historic and cultural resources that are present at closing installations such as the Presidio of San Francisco, Fort Sheridan, Fort Douglas, Fort Des Moines and other closing and realigning installations.

BRAC I SUMMARY. By the end of FY 1991, the Army will have initiated all of the Commission's recommendations as required by Public Law 100-526. The implementation schedule for each of the packages is shown in TABLE 9.

BASE REALIGNMENT AND CLOSURE II (BRAC II): IMPLEMENTATION STATUS

BRAC II OVERVIEW: As outlined earlier in this statement, on January 29, 1990, the Secretary of Defense announced a new set of proposals that will affect the Army's force structure and its base structure. Those proposals, outlined in **TABLE 2**, reflected the initial stages of a measured, coherent Army plan to reshape its forces to accommodate significant changes in the actual and anticipated threats we would expect to face in the future and substantial adjustments in the resources available for national defense. The end state envisioned was a smaller total Army, with quality people and quality facilities, modernized and ready to meet all valid requirements.

This announcement included the following Base Realignment and Closure proposals: eight major force structure adjustments; termination of production at both Army tank plants; layaway or cessation of production at seven Army ammunition plants by FY 1995; a realignment of the supply functions away from a major depot; three installation closures; and a proposal to warm base (semi-active status) an installation.

Subsequent to this announcement, the Defense Base Closure and Realignment Act of 1990 was enacted as a part of the FY 1991 National Defense Authorization Act. As noted previously, the law specifically states the Commission's recommendations shall be the sole authority for recommending closures and realignments of installations which exceed the thresholds specified for Congressional notification under the provisions of 10 U.S.C. 2687, until December 30, 1995. As a result, six of the BRAC II proposals were dropped from further study as shown on **TABLE 2** and these installations were evaluated fairly and impartially under the BRAC 91 process.

BRAC II STATUS. The Army's force and installation realignment proposals that were announced on January 29, 1990, have been subjected to intense study over the past year. Final decisions have been reached on a number of the force structure realignments associated with that plan. These include inactivation of the 2nd Armored Division at Fort Hood, Texas; downsizing of the 194th Armored Brigade at Fort Knox, Kentucky; and, downsizing of the 9th Infantry Division at Fort Lewis, Washington. Initial inactivations which included the 2nd Brigade, 2nd Armored Division and the 1st Brigade, 9th Infantry Division (Motorized) were implemented during Fiscal Year 1990. Additionally, the 194th Separate Armored Brigade was reorganized and downsized into an armored battalion taskforce. However, in 1990, the requirements of DESERT SHIELD/DESERT STORM have required some delay in execution of the remainder of the force structure reductions announced in January 1990.

As also previously noted, the new law also made it necessary for the Army to rescind several of the BRAC II closure and realignment proposals because they would have exceeded the 10 U.S.C. 2687 thresholds. These proposals are:

- *Relocate 7th Infantry Division and close Fort Ord.*
- *Eliminate Troop Support Command.*
- *Red River Army Depot: Realign supply function.*
- *Sacramento Army Depot: Close.*
- *Fort Mcclellan: Close.*
- *Fort Gillem: Semi-Active.*

The remainder of the BRAC II initiatives listed in **TABLE 2** will be pursued by the Army to decision. The Army will finance these initiatives from its operating funds since no special funding account exists for BRAC II. To date, the Secretary of the Army has approved: the inactivation of the 2nd Armored Division, Fort Hood, Texas, one brigade of which has been executed while the remainder is deployed in support of Operation DESERT STORM; the inactivation of the 9th Infantry Division (Motorized), Fort Lewis, Washington, and the activation of a separate motorized brigade in its stead; the inactivation of the 194th Separate Armored Brigade, Fort Knox, Kentucky, and the activation of an armored task force in its place; the inactivation of Headquarters, 4th Army; and the inactivation of the Mississippi Army Ammunition Plant (AAP), Picayune, Mississippi. Production at the Mississippi AAP ended in August 1990 and layaway of the facility is in process. We are assisting the local community's study for alternate uses of the facility by the commercial sector or other government agency and hope to have the results early this summer.

In addition, the BRAC II proposal to terminate tank production at the Detroit and Lima Army Tank Plants also has been modified since last year. In 1991 only the assembly line at the Detroit Arsenal Tank Plant will close. However, the machining operations will continue there as long as we build Abrams tanks. The Lima Army Tank Plant, originally scheduled to close in early 1993, will continue to build Abrams tanks for foreign military sales customers for at least two years beyond that date. Lacking additional foreign military sales or other related work, the Army will then layaway the tank plants in a condition that will support a restart of Abrams tank production if required.

The Army will continue to reassess its BRAC II realignment and closure proposals in light of PL 101-510, anticipated budget constraints, our evolving overseas commitments both in Southwest Asia and NATO, and Army restructurings. Future Base Realignment and Closure proposals which exceed 10 U.S.C. 2687 thresholds will be conducted in accordance with the provision of PL 101-510.

BASE REALIGNMENT AND CLOSURE III - OCONUS (BRAC III): IMPLEMENTATION STATUS

BRAC III OVERVIEW. As stated previously, on September 18, 1990, the Secretary of Defense announced the closure or reduction of operations at 150 overseas U.S. military facilities. This list included 113 Army facilities -- 99 sites in Germany, two in Greece and 12 in Korea. These sites were selected for closure after consideration of Army requirements for the mid 1990s and beyond, as well as anticipated constraints in future Defense manning and budget levels. Twenty-seven additional Army European facilities, 25 in Germany and two in the United Kingdom, were announced for either closure or reduction actions on April 12, 1991, raising to 140 the number of Army overseas installations affected by closure or reduction actions.

For OCONUS installations, the responsibility to determine which installations to close has been delegated by Congress to the Secretary of Defense. The Secretary of Defense works through the Joint Chiefs of Staff (JCS) and the Commanders In Chief (CINCs) of the geographically oriented, unified commands for whom our overseas Army commanders work. Army's OCONUS major commanders (Commander, U.S. Army Europe, USAREUR; Commander, Eighth U.S. Army (Korea), EUSA; Commander, U.S. Army South (Panama), USARSO; and Commander, U.S. Army Pacific, USARPAC) continuously reassess their installation requirements based on the requirements of their unified CINC as well as resources provided by Army Headquarters. The sites selected for closure in September 1990 and April 1991, were determined by the in-theater commanders and recommended to the unified commander who then submitted the proposed list to JCS and then to the Secretary of Defense for final approval.

Reducing operations at overseas installations is directly tied to: elimination of mission requirements; troop relocations or reductions; or unit consolidations.

The future Army will be largely CONUS-based. OCONUS forces, and their supporting installations, will be reduced to the minimum levels sufficient to maintain credible deterrence and to demonstrate our commitment and resolve to our allies worldwide. We are moving ahead with our overseas closures. This is a fairly complex process that involves the Army, the U.S. Government and host nation governments. For instance, in USAREUR, governing policies and agreements require 114 separate steps to be taken from the time a facility is determined to be excess until final disposition is complete. The process is working smoothly, but will become more complex as we accelerate the number of overseas installations we close to become a more CONUS based force.

Troop reductions and changes in mission requirements have been the drivers in our ability to reduce our number of European installations from 858 (as of 1 October 1989) to 714 (as of 24 April 1991). As part of our BRAC III process, the Army term for our overseas base closure process, we announced the closure or reduction in operations of 101 European installations on September 18, 1990 and added another 27 European installations on April 12, 1991. This gives a total of 128 U.S. Army Europe bases that have been announced for closure in the BRAC III process. Prior to the September 1990 announcement we had already begun to turn over some European installations that were excess to our needs. There was a net decrease of 16 Army European installations that were scheduled for turnover to the host nation prior to the BRAC III process being initiated in September 1990. The European closures announced in the BRAC III process are primarily due to reducing from 216,000 soldiers in Europe (FY 1990 level) to 158,000 soldiers in Europe. Tied to this troop reduction, along with changes in mission requirements, has been the decrease of 128 U.S. Army European installations. This includes consolidations as some units will backfill better facilities left by inactivating units as they leave the less economical and unsuitable facilities they presently occupy. As the European force structure reductions for FY 1992 and beyond become more clear, there will be additional installations, in addition to the numbers mentioned above, that will be returned to the host nation.

Army's plan to close 12 of its 98 Korean installations is tied to a change in mission requirements. The trans-Korea pipeline (TKP) (8 sites) is being turned over to the Korean Government to operate later this year. We will also turn over to the Korean Government four communication sites, which are basically unmanned hilltops with an antenna, when a new communications system is in place this summer or fall. All announced closures in Korea are on schedule.

Recent developments have resulted in the withdrawal of 5,000 soldiers from Korea reducing our presence to 27,000. As forces are further reduced in Korea, some under the provisions of Nunn-Warner, you can expect more facilities to be closed. The Nunn-Warner amendment to the FY 1990 Defense Appropriations Bill mandates that the United States Forces, Korea (USFK), review the feasibility of a partial and gradual reduction in the number of U. S. Troops stationed in South Korea. The collective effort of this Congressional mandate and continual pressure to reduce our force presence overseas will result in a reduction of U.S. Forces in Korea over time. This force reduction will then allow us to close more installations. A strategy has been developed by the commander of the Eighth U. S. Army, which includes a prioritized list of closures as forces are reduced.

BRAC III STATUS. From the total of 140 announced overseas base closures, 87 closure actions were scheduled to begin in FY 1991, 23 in FY 1992 and 29 in FY 1993 or later. One installation under the BRAC III process was closed in FY 1990. For the 87 closure actions scheduled to begin in FY 1991, 71 are in Germany, two in Greece, two in the United Kindom and 12 in Korea. Eighty-three of these actions are on schedule with the remaining four installations, all located in Germany, affected by Operation DESERT STORM. These four sites are primarily troop barracks. Out of the 83 closure actions on schedule for FY 1991, 19 of these sites have been closed as of April 24, 1991.

BRAC III RESIDUAL VALUE. Two areas are of particular interest with regard to our overseas closures are residual value and environmental concerns. Our policy on residual value is to extract as much value as possible based on the U.S. funded capital improvements we have made over time to our facilities. This becomes all the more meaningful given Congress' establishment of the "DoD Overseas Military Facility Investments Recovery Account" last year. Some status of forces agreements (SOFA) and SOFA supplementary agreements permit the payment of residual value when the U.S. turns over facilities to the host government. This is the case in Germany -- we can expect a payment to the U.S. for the value of U.S. funded capital improvements escalated to current value and then reduced based on depreciation and damages (both failure to maintain and environmental claims). Under the SOFA supplementary agreement with Germany, the U.S. is liable for 75% of the costs of any claims with Germany paying 25%. However, for the OCONUS closures, offsetting claims will no doubt just be negotiated as a decrement to the residual value. In Korea, the SOFA between the Korean Government and the U.S. does not provide for the payment of residual value -- but we also can turn over the facilities in an as-is condition. In Greece, the U.S. right to recover residual value is contained in a 1953 facilities agreement, with negotiations determining the amount and manner of compensation. We are carefully watching the residual value issue to ensure our interests are represented. It must be pointed out that in Germany, Greece, and Korea, the host nation owns the land and they lease this land to the U.S. rent free; therefore, any appreciation of the land value is not included in residual value negotiations -- only the escalated value of U.S. funded capital improvements to real property as adjusted for age and condition. DoD will provide a report to Congress on June 1, 1991, providing the residual value estimates for all OCONUS facilities.

BRAC III (OCONUS) ENVIRONMENTAL POLICY. The Army has established an environmental policy for our overseas installations. As a foundation this policy uses the provisions of Executive Order 12114 which reflect the U.S. Government's policy on environmental actions abroad. Our goal is to leave a good environmental footprint when we close our overseas installations -- however, we do not plan on undertaking clean-up actions solely for the purpose of turnover. In Germany, the cost of clean-up for known environmental problems will be used in the residual value negotiations. Known environmental problems have been documented and we will continue to remove all toxic and hazardous wastes as well as clean up category 1 actions (actions which are health and safety related or where we incur a legal liability if we ignore them). In Korea, we will also clean up category 1 actions as well as dispose of all hazardous and toxic wastes, but we do not plan to undertake environmental clean-up solely for the purpose of site turnover. The SOFA with Korea contains no language as to responsibility for environmental clean-up.

BASE REALIGNMENT AND CLOSURE 91 (BRAC 91):

THE ARMY'S OBJECTIVE FOR BRAC 91

The Army's objective during the process established by Public Law 101-510, the National Defense Authorization Act for 1991 (BRAC 91), was to reduce and streamline its basing structure to reflect reductions in force structure and management improvements, while ensuring the capability to expand should future threats require an increase in force structure. In order to accomplish this in the most efficient manner possible, the Army's intent was to:

- Review all installations with respect to the needs of the projected force structure.
- Close unneeded installations and consolidate operations to generate long term savings and operational efficiency.
- Pursue consolidation, realignment, and closure when it makes military and economic sense to do so.
- Attempt to minimize hardship on all involved - soldiers, family members, civilian employees, and host communities - by seeking ways to ease the transitional difficulties that accompany closures and realignments.

The Army is proud of all of its installations, and they all have contributed greatly to the quality Army that we have today. But a smaller Army requires less infrastructure. In some instances, fewer bases may be needed because of the inactivation of full divisions. In others, installations may need to be closed or realigned to reflect reductions in or consolidations of, maintenance or training workload or consolidations and streamlining of support activities.

To assist in making these tough decisions, the Army was guided by a number of basic principles:

- Maximize readiness with installations capable of generating, projecting and sustaining combat power in support of national military objectives.
- Consolidate into our best, most efficient facilities.
- Maximize quality of life and minimize hardships for our soldiers, their families and civilian employees.
- Provide for appropriate expandability and reversibility to ensure an installation base capable of responding to future force structure requirements.
- Provide for adequate mobilization capability to train and mobilize as called for by various military contingencies.

- Provide for adequate training land to sustain a trained and ready force.
- Consider the costs and savings of proposed realignments and closures.
- Consider the economic impact on communities.
- Consider environmental impacts, restoration and costs of proposed realignments and closures.

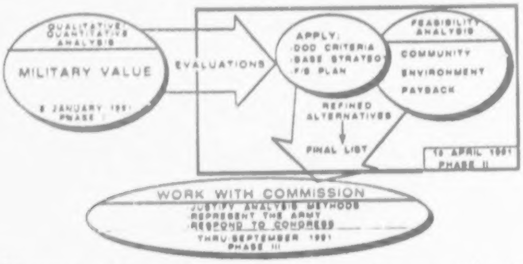
ARMY PROCESS/METHODOLOGY

The national strategy drives our force structure which, in turn, dicates how we will station our forces.

STRATEGY--> STRUCTURE--> STATIONING--> SUSTAINMENT

BRAC 91 was the implementation vehicle for the stationing which reflects the revised national strategy and proportionate force structure reduction. The Army formed a special study group known as the Total Army Basing Study (TABS) group within the Office of the Chief of Staff of the Army, subordinate to the Director of Management, to prepare the Army's recommendations to the Secretary of Defense and ultimately to this commission. I was charged with overseeing this effort.

THE PROCESS



The figure above depicts the process that the Army used to formulate the recommendations that have been submitted to this Commission. I would like to discuss each phase in detail and provide specific examples where appropriate.

DETERMINATION OF INSTALLATION CATEGORIES. Before the Army could begin to analyze its installations, it was necessary to group them in a way which allowed us to compare those that have historically performed the same types of missions. Our installations do not lend themselves to a homogeneous grouping because they all have unique functions and are designed to serve specific purposes. For this reason, we divided them into the following categories:

FIGHTING
- Maneuver Installations
- Major Training Areas

TRAINING
- Initial Entry Training/Branch Schools
- Professional Schools

COMMAND AND CONTROL

INDUSTRIAL
- Depots
- Commodity Oriented Installations

- -Production Installations
- -Ports

CORPS OF ENGINEERS DIVISION/DISTRICTS

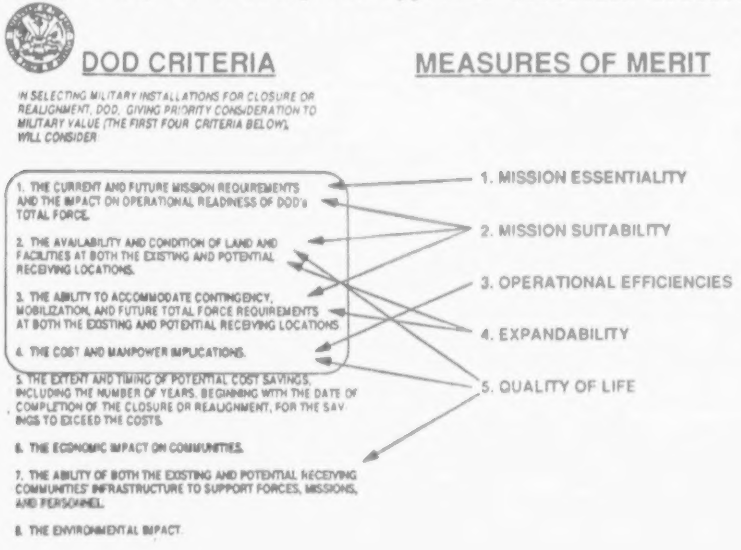
RESERVE COMPONENT INSTALLATIONS

OTHER(Not considered--all below 10 USC 2687 thresholds)
- -Stand Alone Housing
- -Cemeteries
- -Recreation Areas
- -Hospitals
- -Communications
- -Miscellaneous

TABLE 10 shows a complete listing of the Army's U.S. installation inventory.

PHASE I - DETERMINE MILITARY VALUE. The approved selection criteria required the Services to give "priority consideration" to "military value," as defined by the first four criteria, in selecting installations for realignment or closure. In light of this requirement, the Army dedicated the first phase of its study to the determination of military value. Our objective was to look at the various categories of installations and try to identify the value of an installation relative to other installations within each category and, in turn, as it relates to the Army as a whole given the need to reduce or eliminate functions no longer needed.

We felt that the best way to compare installations was through a quantitative analysis. DoD issued broad selection criteria, similar to those used by the 1988 Commission, since it is impossible to specify detailed criteria and factors applicable to all bases within a military service. Because they also issued policy guidance requiring the use of objective and quantifiable measures designed to interpret the criteria as they apply to each specific Service, the Army developed and used the Measures of Merit during Phase I of our study. The Measures of Merit were developed to identify and describe the necessary ingredients to assess military value of an installation. Simply stated, they are the Army's way of viewing the approved selection criteria.



DOD CRITERIA

IN SELECTING MILITARY INSTALLATIONS FOR CLOSURE OR REALIGNMENT, DOD, GIVING PRIORITY CONSIDERATION TO MILITARY VALUE (THE FIRST FOUR CRITERIA BELOW), WILL CONSIDER:

1. THE CURRENT AND FUTURE MISSION REQUIREMENTS AND THE IMPACT ON OPERATIONAL READINESS OF DOD's TOTAL FORCE.
2. THE AVAILABILITY AND CONDITION OF LAND AND FACILITIES AT BOTH THE EXISTING AND POTENTIAL RECEIVING LOCATIONS.
3. THE ABILITY TO ACCOMMODATE CONTINGENCY, MOBILIZATION, AND FUTURE TOTAL FORCE REQUIREMENTS AT BOTH THE EXISTING AND POTENTIAL RECEIVING LOCATIONS.
4. THE COST AND MANPOWER IMPLICATIONS.
5. THE EXTENT AND TIMING OF POTENTIAL COST SAVINGS, INCLUDING THE NUMBER OF YEARS, BEGINNING WITH THE DATE OF COMPLETION OF THE CLOSURE OR REALIGNMENT, FOR THE SAVINGS TO EXCEED THE COSTS.
6. THE ECONOMIC IMPACT ON COMMUNITIES.
7. THE ABILITY OF BOTH THE EXISTING AND POTENTIAL RECEIVING COMMUNITIES' INFRASTRUCTURE TO SUPPORT FORCES, MISSIONS, AND PERSONNEL.
8. THE ENVIRONMENTAL IMPACT.

MEASURES OF MERIT

1. MISSION ESSENTIALITY
2. MISSION SUITABILITY
3. OPERATIONAL EFFICIENCIES
4. EXPANDABILITY
5. QUALITY OF LIFE

The figure above shows the relationship between the measures and the criteria. The principal benefit of the use of the measures is that they lend themselves to the development of quantifiable attributes which enable comparison among installations, are measurable, and help provide an overall depiction of an installation's military value.

The headquarters staff and the Army's major commands worked jointly to develop the attributes; i.e., the quantifiable characteristics, that were tailored to the specific installation categories. Listed below are the attributes that were used to measure the mission suitability and mission essentiality of fighting installations. This only reflects two out of the five measures of merit and some of the supporting attributes.

MISSION SUITABILITY

- Contiguous Maneuver Acres
- Operational/Admin Facilities
- Aviation Maintenance Facilities
- Vehicle Maintenance Facilities
- Supply/Storage Facilities
- Distance to Training Area

MISSION ESSENTIALITY

- Total Maneuver Acres
- Ranges Available
- Deployment Network
- Total Acres Available
- Reserve Component Support

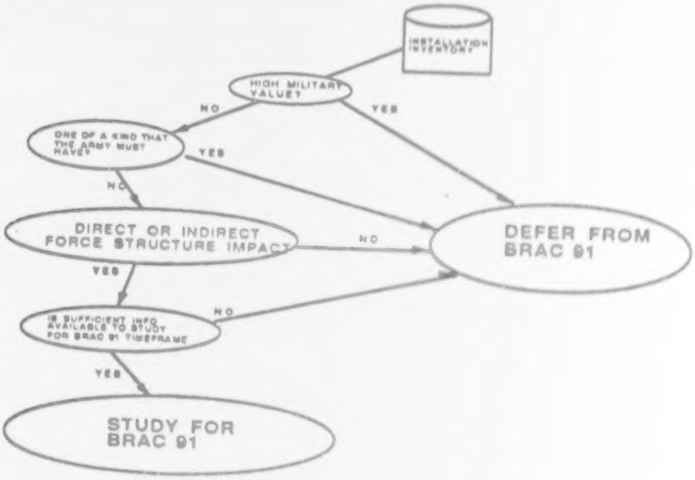
During the quantitative analysis, the measures of merit were weighted to illustrate their relative importance within the context of military value. For example, since we view mission suitability as being a more important aspect of value than operational efficiencies, we assigned it more weight. In addition, we weighted each attribute to illustrate its relative importance within each measure of merit. For example, the amount of contiguous maneuver acres available is a more important aspect of mission suitability for fighting installations than the amount of supply/storage facilities available, and was given more weight. Although the measures of merit were used consistently and weighted the same across the spectrum of installation categories, the attributes differed by weight and description to reflect the varying functions required of the installations within the different categories. The major commands used actual data (in acres or square feet, etc.) where possible. In cases where this was not possible, ratings on a scale of 0 to 10 were used.

After the major commands and the installations collected the raw data, and the weights were agreed upon, we then used a decision support software package that allowed us to enter the information and produce a "military value array" which rank ordered the installation from first to last by category. Generally speaking, installations received favorable scores if they were larger, economical to operate, or modern. For example, posts with relatively large populations, multiple activities and missions, low operating costs and a high percentage of permanent facilities would fare better in the rankings than single mission posts with fewer facilities.

This quantitative assessment or array provided us with only a starting point from which we began an evaluation of the Army's base structure. It did not produce a decision on which base should be closed or realigned. Although the assessment offered a logical basis for judging possible opportunities for closure and realignment, it was just one element in the Army's overall evaluation. It must be kept in mind that there is no mathematical formula which can be used to determine which bases can be closed. Such decisions are complex and are made using a combination of quantitative and qualitative decision support tools, logic, and professional judgment.

Therefore, the comparative rankings provide a point of departure from which a detailed analysis of the realignment and closure potential of the installation can begin. They do not provide a "close this installation first" listing. There are several unique considerations which cannot be captured through the use of standard, uniform criteria. Installation-unique capabilities and functions must be considered before any decision to close or realign an installation is made. This was accomplished in phase II of the Army's study.

***PHASE II* - DEVELOP REALIGNMENT/CLOSURE RECOMMENDATIONS**. Because the Army has over 1,200 properties, it was necessary to narrow the focus of the study to those installations that it made sense to evaluate given the limited amount of time. To accomplish this, the Army developed a method of screening installations to determine those that would be studied in depth. The figure below depicts this process:


INSTALLATION INVENTORY
HIGH MILITARY VALUE?
NO
YES
ONE OF A KIND THAT THE ARMY MUST HAVE?
YES
NO
DIRECT OR INDIRECT FORCE STRUCTURE IMPACT
NO
DEFER FROM BRAC 91
YES
IS SUFFICIENT INFO AVAILABLE TO STUDY FOR BRAC 91 TIMEFRAME
NO
YES
STUDY FOR BRAC 91

This screening, or capacity analysis, represented the Army's first attempt at developing what we call "reasonable and feasible" realignment and closure alternatives. I will discuss each phase detail.

In the first step, we looked at the military value evaluations and identified the Army's best installations within each category. Although these rankings did not tell us which installations to close, they did tell us which ones not to close. Installations determined to have a high military value were deferred from further consideration as closure candidates within BRAC 91. They were, however, eligible for use as possible gaining installations for other activities. This phase represented the Army's first cross check of the DoD criteria in the selection of study candidates.

In the second step, we looked at those installations that had some unique or one of a kind aspect either with respect to proximity to its supported units, critical functions or activities at the installation, or unique capabilities or facilities sited at the installation. If an installation was identified as unique, it was deferred from further consideration for realignment or closure under BRAC 91 despite the fact that it may have had a low rating in military value. Schofield Barracks, Hawaii, is an example of a fighting installation with a low value rating that possesses a unique strategic location.

In the third step, we identified those installations which were affected directly or indirectly by the reducing force structure. An installation was affected directly if its main tenant, such as a division, was slated to leave the force structure. Direct impacts only occurred on installations in the fighting category. For all other installation categories, the impact of force structure was indirect. It is impossible to correlate reducing force structure with proportionate reductions in training and industrial installations. The Army has been developing "future visions" of its major commands that account for things such as reduced training loads and industrial output as a result of the decreasing force structure and also implement management efficiencies. These visions represent the indirect link between reducing force structure and reducing base structure for these types of installations. Installations that were not either directly or indirectly affected by force structure were deferred from further consideration for realignment or closure within BRAC 91.

In the final step of the screening, we determined whether data and analysis concerning some of these reshaping concepts was sufficient to go forward with a recommendation within BRAC 91 or whether further study was needed. Some elements of the "future visions" require additional study or revision. Others may require implementation time outside of the legislated period for BRAC 91. In other cases, excessive up front costs prohibit simultaneous implementation. Any installation that was part of concept that was not fully developed was deferred from further consideration for realignment or closure within BRAC 91. This does not preclude reevaluation for BRAC 93 or 95.

This screening process allowed the Army to dedicate the bulk of its time and effort to providing decision makers with sufficient information to make knowledgeable decisions on realistic options that had been fully developed. It also ensured that the decisions made were consistent with an overall vision for the Army of the future. All of the steps in the screening process represent an analysis that is consistent with the intent of the DoD criteria and the Force Structure Plan. As a result, we narrowed the focus of the study to installations that we felt confident were good closure/realignment candidates on which we could develop sufficient information to make an informed recommendation to the Army leadership.

DEVELOP ALTERNATIVES. After the screening, we identified reasonable realignment and closure alternatives using the force structure plan, the military value evaluations, the capacity analyses, and the "future visions." The test for "reasonability" was only that the action support the Army's operational concept for the future.

The next step was to determine the "feasibility" of these actions in terms of their return on investment, and economic and environmental impacts. To be feasible, an option must be affordable in terms of up front costs and long term savings; it must be environmentally sound; and the Army must be able to complete it within the legislated time lines.

To determine feasibility, we examined impacts in the following areas:

- *Operational*. The operational impacts were determined by assessing the impacts on the readiness, missions, and management efficiency of the Army.

- *Return on Investment*. The Army used the Cost of Base Realignment Action (COBRA) model to assess the relative economic value of proposed realignment or closure actions. COBRA was developed by the Logistics Management Institute (LMI) for use by the Defense Commission on Base Realignment and Closure (1988 Commission). The model estimates the cost of the major actions associated with the transfer of activities between bases and, if appropriate, the disposition of assets at closed bases. It reports the cost in terms of key decision parameters which were used by the Army to review each scenario independently and as part of an entire package to determine if the costs were justifiable in view of the expected return. The most important of these parameters was the return on investment period, defined as the time in years from the date the closure or realignment is complete until the accumulated savings meet the initial cost required to close or realign the base. The 1988 Commission used six years as the discriminator for the payback period. Although the Army was not bound by six years as a cut-off, it viewed a return on investment period of six years or less as having economic merit, but did not exclude those that were longer from consideration.

The cost of environmental restoration was not included in the calculations for return on investment, since DoD has a legal obligation regardless of whether an installation closes or not. Nevertheless, the Army did consider the cost during its decision making process.

The Army included an estimate of the value of the land which could be disposed of as a result of a closure. The reviews were performed by appraisers in the U.S. Army Corps of Engineers. Property values were based on the highest and best use of the land. When the estimated environmental restoration cost was higher than the estimated land value, the Army did not compute any land value in the calculation for return on investment.

All implementation costs and reduced operating costs are in constant FY 1991 dollars. The resulting cash flows are discounted at 10% to determine net present value and return on investment. This accounts for differences in the timing of expenditures and reduced operating costs.

Military construction, moving, and personnel costs were estimated using standard DoD factors.

The important factors used for comparing alternatives were:

- *Return on Investment Period*. The amount of time between the completion of the realignment/closure action, and the point where the cumulative reduction in operating costs equaled the total implementation costs.

- *Break Even Period*. The amount of time between the beginning of the statutory six year implementation period and the point where the cumulative reduction in operating costs equaled the total implementation costs.

- *Steady State Savings*. The recurring reduction in annual operating costs that occurs after all implementation costs have been taken into account.

COBRA is the most sophisticated comparative tool available to perform headquarters-level analysis of base closure and realignment costs. Designed to function with the data readily available to major command or service-level staffs, it estimates the total expected implementation costs or reductions in operating costs attributable to base realignments or closures. It is not designed to portray actual budget data. It is a management decision tool which assists in comparing alternatives.

ECONOMIC IMPACT. The Army measured the direct and indirect effect on employment in local communities at closing or realigning bases. DoD's Office of Economic Adjustment (OEA) developed a model based on the formulae and rationale used by the 1988 Commission, with modifications based on the GAO recommendation to consider the indirect economic impacts. In total, the Army considered direct and indirect employment impacts, as well as the current unemployment rate in the community surrounding the installation and the economic growth in terms of percentage of gains or losses for the period of 1984-1989 in its decision to close or realign a base.

ENVIRONMENTAL IMPACTS. The Army reviewed the environmental consequences of the various proposals by considering impacts on the following:

- Threatened or endangered species
- Wetlands
- Historic or archaeological sites
- Pollution control
- Hazardous materials/waste
- Land and air uses
- Programmed environmental cost/cost avoidance

INTER-SERVICE COORDINATION. The Army met extensively with both the Navy and the Air Force and discussed options for collocating or consolidating functions that had previously been manned and maintained separately by each Service. Many of the initiatives in the industrial category reflect consolidations of maintenance or research and development functions.

REFINE ALTERNATIVES. As the Army evaluated the impacts on each of the alternatives, several were deferred from further consideration within BRAC 91. The primary reasons were poor return on investment and force structure uncertainties.

Throughout Phase II, the Army leadership closely monitored the emerging results of the impact analysis and provided valuable guidance concerning their view of the Army's strategic direction. The major commands also worked with the headquarters staff to ensure that all necessary information was made available and that decisions were based on the most current data.

The end result of this phase was the list of final recommendations released by the Secretary of Defense on April 12, 1991. A summary of these recommendations is shown at TABLE 11.

INTERNAL CONTROLS. The Army established internal controls to ensure the accuracy of the data collected in both phases of the study. These included:

-Use of a commercial software package (Decision-Pad) to ensure a consistent analysis of data used to rank installations in Phase I.

-Mandating the use of common data sources and approaches to quantify the attributes used.

-Establishing validity of the installation screening process by verifying the link to the DoD criteria and the force structure plan.

-Using standard software packages and common data sources to evaluate the environmental and economic impacts on the installations.

-Using a standard software package to compute return on investment for the various alternatives studied.

-Using the Office of the Assistant Chief of Engineers (OACE) to validate the cost assumptions for construction and to reconcile cost discrepancies. OACE performed capacity analyses for the installations to determine if excess capacity existed; performed stationing scenarios using a mainframe standard information system to determine facility requirements; reviewed construction requirements submitted by the major commands for each alternative; and made site visits to selected installations to perform in depth reviews of construction requirements.

-Use of the Army Audit Agency (AAA) to validate the data sources and approaches used to assess military value of the installations and to validate the standard factors used in the cost model. The auditor evaluation consisted of reviewing algorithms used in the cost model; assessing the reasonableness of standard factor computations; tracking the data used to compute standard factors back to source documentation and verifying mathematical calculations; reviewing the data used to compute return on investment; and the reasonableness of the assumptions used in all calculations.

SUMMARY

The base realignments and closures recommended by the Defense Secretary's Commission in 1988 (BRAC I), those announced by the Secretary of Defense on January 29, 1990 (BRAC II) and on September 18, 1990, and April 12, 1991 (BRAC III), and the new process provided by the Base Closure and Realignment Act of 1990 (BRAC 91), continue to offer the Army unique opportunities to achieve economic efficiencies and improve our operational effectiveness. To meet fiscal realities, Army must seek greater efficiencies in stationing of our forces both at home and overseas. As we reshape the Army's force and support structure and build down to a smaller Army, we remain sensitive to the hardships to our employees and communities that are inherent in base closures and realignments. We remain committed to exercising our stewardship responsibilities to the environment and the preservation of the historic and cultural resources at our closing installations. The Army is also fully committed to working with your Committee in particular and the Legislative Branch as a whole, as we continue to seek ways to improve our base structure in the future.

I would ask the Committee to recognize that the Military Services are undergoing a time of fundamental change. I wish to assure the members of the Committee that as the Army transitions to a smaller total Army, with your support, it will still be an Army of quality people and quality facilities, modernized and ready to meet all levels of threat as well as provide the peacetime support the Army has always offered to this nation.

Mr. Chairman, this concludes my statement. Thank you.

TABLE 1

BRAC I - CLOSURES AND REALIGNMENTS

(PUBLIC LAW 100-526)

PART I: CLOSURES

ALABAMA
Alabama Army Ammunition Plant
Coosa River Storage

ARIZONA
Navajo Depot

CALIFORNIA
Hamilton Army Air Field
Presidio of San Francisco

COLORADO
Bennett Army National Guard

CONNECTICUT
FH Ansonia, 04
FH E Windsor, 08
FH Fairfield, 65
FH Manchester, 25
FH Middletown, 48
FH Milford, 17
FH New Britain, 74
FH Orange, 15
FH Plainville, 67
FH Portland, 36
FH Shelton, 74
FH Westport, 73

FLORIDA
Cape St. George

HAWAII
Kapalama

ILLINOIS
Fort Sheridan
USARC Addison Housing
Worth Family Housing

INDIANA
Indiana Army Ammo Plant
Jefferson Proving Ground

IOWA
Fort Des Moines

KENTUCKY
Lexington Depot

LOUISIANA
New Orleans Military Ocean Terminal

MARYLAND
Nike Aberdeen
Nike Washington-Baltimore
USARC Gaithersburg

MASSACHUSETTS
Army Materials Tech Lab
FH Bedford, 85
FH Beverly, 15
FH Burlington, 84
FH Hull, 36
FH Nahant, 17
FH Randolph, 55
FH Swansea, 29
FH Topsfield, 05
FH Wakefield, 03

MICHIGAN
Pontiac Storage

MISSOURI
Nike Kansas City, 30
St Louis Area Spt Ctr Wheery Housing

NEW JERSEY
NIKE NY 54 Housing
NIKE NY 60 Housing
NIKE NY 79 80
NIKE NY 93 94
NIKE Philadelphia 41/43

NEW MEXICO
Fort Wingate

NEW YORK
Dry Hill Family Housing
Manhattan Beach Housing
NIKE NY 01 Housing
NIKE NY 25
NIKE NY 99 Housing

PENNSYLVANIA
Coraopolis FH Site 71
Coraopolis FH Site 72
Irwin Spt Det Annex 36
Pitt FH 02
Pitt FH 03
Pitt FH 25
Pitt FH 37
Pitt FH 42
Pitt FH 43
Pitt FH 52
Tacony Warehouse

RHODE ISLAND
FH Davisville
FH N. Smithfield

UTAH
Fort Douglas

VIRGINIA
Cameron Station
Manassas FH
NIKE Norfolk 85 Housing
Woodbridge Housing Site

WASHINGTON
Midway Housing Site
Youngs Lake Housing Site

WISCONSIN
Sun Prairie FH

*FH = Family Housing

Table 1

BRAC I - CLOSURES AND REALIGNMENTS

(PUBLIC LAW 100-526)

PART II: REALIGNMENTS

IN

Fort Leonard Wood, MO
Fort Jackson, SC
Fort Benjamin Harrison, IN
Fort Devens, MA
Fort Huachuca, AZ
Fort Belvoir, VA
Fort Monmouth, NJ
Fort Lee, VA
Fort Carson, CO
Fort Detrick, MD
Tobyhanna Depot, PA
Redstone Arsenal, AL
Letterkenny Depot, PA
Detroit Arsenal, MI
Picatinny Arsenal, NJ
Yuma Proving Ground, AZ
Tooele Depot, UT
Red River Depot, TX
Anniston Depot, AL
Sierra Depot, CA
Schofield Barracks, HI
Fort Lewis, WA
Fort Myer, VA
Fort McNair, DC
Fort McCoy, WI
Fort Ord, CA
Oakland Army Base, CA
Walter Reed AMC, DC
Fort Bragg, NC
Fitzsimmons AMC, CO
Fort Gordon, GA
Fort Drum, NY
Los Alamitos AFRC, CA
Sacramento AD, CA
Fort Leavenworth, KS
Fort Knox, KY
Fort Sill, OK
Fort Shafter, HI
Fort Benning, GA
Fort Campbell, KY
White Sands Missile Range, NM
Harry Diamond Labs, MD
Savanna Army Depot, IL
Camp Parks, CA
Bluegrass AD, KY
Hawthorne AAP, NV
Fort Irwin, CA
Aberdeen Proving Ground, MD
Fort Indiantown Gap, PA
Fort A.P. Hill, VA
Natick RDEC, MA

OUT

Fort Leonard Wood, MO
Fort Jackson, SC
Fort Benjamin Harrison, IN
Fort Devens, MA
Fort Huachuca, AZ
Fort Belvoir, VA
Fort Monmouth, NJ
Umatilla Depot, OR
Pueblo Depot, CO
Fort Meade, MD
Fort Holabird, MD
Fort Dix, NJ
Fort Bliss, TX

NOTE: Installations listed under both the IN and OUT columns are losing and gaining functions or personnel.

TABLE 2

BRAC II - PROPOSED FORCE STRUCTURE & BASE REALIGNMENTS

IMPLEMENTATION SCHEDULE

January 29, 1990

ACTION	IMPLEMENTATION FISCAL YEAR*
Reduce Active Army**	90-94
Reduce Reserve Components	90-94
Inactivate 2d Armored Division	90-91
Downsize 194th Armored Brigade	90
Downsize 9th Infantry Division (Mtz)	90-92
~~Relocate 7th Infantry Division and Close Fort Ord~~	~~92-93~~
Layaway Mississippi Army Ammunition Plant	90-91
Layaway Indiana Army Ammunition Plant	93
Cease Workload at and lease Kansas AAP	93
Layaway Louisiana AAP or Scranton AAP	93
Layaway Sunflower AAP	94
Layaway Longhorn AAP	94
Terminate Tank Production at Detroit ATP***	91
Terminate Tank Production at Lima ATP***	93
~~Realign Supply Function at Red River AD~~	~~90-93~~
~~Close Fort McClellan~~	~~93~~
~~Warm Base Fort Gillem~~	~~92~~
Inactivate HQ, 4th Army	91
~~Close Sacramento AD~~	~~92-93~~
~~Eliminate Troop Support Command~~	~~92-93~~
Convert Health Services Command	92-93
Inactivate 1st Region, CIDC	91
Reorganize AMC Headquarters	91-95
Reorganize DESCOM Headquarters	91-95
Streamline AMC Management Engineering Activity	91-95
Streamline Information Systems Command	91-95

* Subject to proposals being approved following completion of required analyses and notification to Congress under 10 U.S.C. 2687, if appropriate.

** Partially satisfied by actions outlined below.

***These proposals are being modified to permit some work to continue beyond the implementation period.

NOTE: [1] Underlined proposals have been approved by the SECARMY for execution.

[2] Overstruck proposals have been rescinded in accordance with the Defense Base Closure and Realignment Act of 1990.

TABLE 3

AFFECTED INSTALLATIONS BRAC III -- OCONUS

AS OF 12 APR 91

AFFECTED AREAS INCLUDE KASERNES AND PROPERTIES IN THE FOLLOWING OCONUS COMMUNITIES

GERMANY					UNITED KINGDOM	KOREA	GREECE
COMMUNITY	TOTAL SITES	ROUND 1	ROUND 2	ROUND 3	(2 OF 6) ROUND 3	(12 OF 99) ROUND 1	(2 OF 4) ROUND 1
ANSBACH	12	1					
ASCHAFFENBURG	12	7					
AUGSBURG	20	6					
*BAD TOELZ	10	9					
BAMBERG	12	1		2			
BAUMHOLDER	25	1					
DARMSTADT	21	1					
FRANKFURT	44	5					
FULDA	24			4			
GIESSEN	41	3		1			
GOEPPINGEN	8		3				
GRAFENWOEHR	30		1	5			
HANAU	30	5					
HEILBRONN	20	4					
KARLSRUHE	29	1		1			
MAINZ	17	2					
MANNHEIM	19	1	1				
MUNICH	24	12					
NETHERLANDS (SITE IN FRG)	37	1					
NUERNBERG	30	2	1				
*NEU ULM	24	21					
PIRMASENS	22	1					
STUTTGART	43	11					
WORMS	23		2				
WUERZBURG	27	4					
ZWEIBRUCKEN	32		4				
	**636	99	12	13	2	12	2
		ANNOUNCED 18 SEP 90	ANNOUNCED 12 APR 91	ANNOUNCED 12 APR 91	ANNOUNCED 12 APR 91	ANNOUNCED 18 SEP 90	ANNOUNCED 18 SEP 90

* = TOTAL COMMUNITY CLOSURE REMAINING SITES ALIGNED UNDER EXISTING COMMUNITIES

** NOT ALL MILITARY COMMUNITIES AFFECTED

TABLE 4

PROJECT VANGUARD

INITIATIVES

- Realign CONUS Forces
- Realign Training and Combat Developments
- Realign Personnel Functions
- Realign Installation and BASOPS Management
- Restructure and Realign Logistics Functions
- Restructure and Realign Information Management
- Restructure and Realign Intelligence Functions
- Realign Army Staff

TABLE 5

HOMEOWNERS ASSISTANCE PROGRAM

(PUBLIC LAW 89-754, SECTION 1013)

AUTHORITY. The Homeowners Assistance Program (HAP) is a special relief program authorized by Public Law 89-754, Section 1013 (Demonstration Cities and Metropolitan Development Act of 1966).

PROGRAM INTENT. The law authorizes financial assistance to those eligible military and civilian employee homeowners serving at or near military installations who suffered losses incident to the disposal of their homes caused by a drop in real estate values when such military installations are ordered to be closed or scope of operations is reduced.

PROGRAM DETERMINATION. In order for any benefits to be paid under the program, there must first be a determination that:

(1) There has been a public announcement of a base closure or reduction in the scope of operations of the base; *and*

(2) The closure or reduction has caused a substantial drop in the real estate market in the area of the base; *and*

(3) As a result of such closure or reduction, no present market exists for sale of the property upon reasonable terms and conditions.

In order to reach this determination, a survey and economic analysis of the area real estate market is made to ascertain the extent of base closure impact on the market.

In addition to the public announcement, there has to be an order to close the base. An announcement or an order of a base closure study is not sufficient. There need not be an actual closure to implement HAP, but there must have been a public announcement, an order to close and the requisite adverse market impact.

ELIGIBILITY. The program is available, when there is no present market for the sale of the property upon reasonable terms and conditions, to military members, and to civilian Federal employees and nonappropriated fund employees of DoD instrumentalities (other than temporary employees) who are:

(1) An owner-occupant of property improved with a one or two family dwelling situated at nor near the base affected by the closure action; *and*

(2) Assigned or employed at or near the base ordered to be closed; *and*

(3) The owner-occupant of the property at the time of the public announcement of the closure action.

BENEFITS. Under HAP there are three types:

(1) Payment of partial compensation for the losses sustained in the private sale of the dwelling.

(2) Payment of the costs of the judicial foreclosure of a mortgage.

(3) Purchase of the dwelling by the Government.

In private sale cases, the amount paid by the Government is 95% of the value of the dwelling prior to the closure announcement, less the fair market value at the time of the sale or the sales price, whichever is greater.

In cases of purchase by the Government, the amount paid is 85% of the value of the dwelling prior to the closure announcement or the amount of the outstanding mortgage. Effective March 31, 1991, the 85% is reduced to 75%.

In fixing the amount of benefits due in either private sale or Government purchase cases, the homes of the applicants are individually appraised to determine their valuation prior to the closure or reduction announcement as well as the valuation at the time of private sale or Government purchase.

OVERSEAS BENEFITS. HAP benefits are available to otherwise eligible military and civilian Federal employee homeowners at overseas bases who sell their on-base or off-base property as a result of the announced closure or reduction in scope of operations. However, since there is no authority to acquire off-base property under the HAP, Government purchase is not available to owners of off-base property. HAP benefits are also available to civilian employees serving overseas and entitled to reemployment at a base ordered to be closed. This is an exception to the eligibility requirements of owner-occupancy and employment at or near the affected base.

Program administration, management and execution of the program for DoD has been delegated to the Secretary of the Army and his Chief of Engineers.

Funding for HAP is provided by a special revolving fund made available to the Secretary of Defense by Section 1013 of the Act. The Fund is not self supporting and requires annual appropriations.

If the applicant elects to have the Government acquire the dwelling, acquisition is only for the accommodation of the applicant. There is no governmental need for the property, so the dwelling must be sold by the Government.

While the Corps of Engineers executes the overall program, maintenance, management and disposal of property acquired under the Act is by the Secretary of Housing and Urban Development (HUD), acting through the Federal Housing Administration (FHA) on behalf of the Secretary of Defense under an agreement between them. HUD has formally requested that they be relieved of their part in execution of this program. Army is working with HUD towards transition of this function.

TABLE 6

BRAC I - CLOSURES & REALIGNMENTS

ARMY FINANCIAL SUMMARY

	FY 1989*	FY 1990	FY 1991
	(Dollars in Millions)		
ONE-TIME IMPLEMENTATION COSTS:			
Military Construction	23.0	149.4	227.0
Family Housing			
- Construction	0	0	0
- Operations	2.5	0	0
Environment	0	28.2	50.4
Operation & Maintenance	17.4	35.1	108.7
Military Personnel - PCS	0	0	1.2
Other	0	9.3	53.2
Revenues from Land Sales (-)	0	0	0
TOTAL COSTS	42.9	222.0	440.5
SAVINGS			
Military Construction	23.0	9.2	15.3
Family Housing			
- Construction	0	0	0
- Operations	0	0	15.0
Operation & Maintenance	0	1.5	3.7
Military Personnel	0	-0.5	0.9
Other	0	0	0
Civilian ES	(0)	(0)	(25)
Military ES	(0)	(0)	(145)
TOTAL SAVINGS	23.0	10.2	34.9
NET IMPLEMENTATION COSTS			
Military Construction	0	140.2	211.7
Family Housing			
- Construction	0	0	0
- Operations	2.5	0	-15.0
Environment	0	28.2	50.4
Operation & Maintenance	17.4	33.6	105.0
Military Personnel	0	0.5	0.3
Other	0	9.3	53.2
Revenues from Land Sales	0	0	0
Civilian ES	(0)	(0)	(25)
Military ES	(0)	(0)	(145)
NET IMPLEMENTATION COSTS	19.9	211.8	405.6

* Funded by Army prior to establishment of Base Closure Account in FY 1990.

TABLE 6

BRAC I - CLOSURES & REALIGNMENTS

ARMY FINANCIAL SUMMARY *(Continued)*

(Dollars in Millions)

	FY 1992	FY 1993	FY 1994	FY 1995
ONE-TIME IMPLEMENTATION COSTS:				
Military Construction	186.3	235.9	50.7	0
Family Housing				
- Construction	0.7	0	0	0
- Operations	0	0.1	0	0
Environment	121.7	78.6	28.4	1.0
Operation & Maintenance	47.2	81.7	112.4	40.0
Military Personnel - PCS	0	0	0	0
Other	7.0	36.7	9.4	9.9
Revenues from Land Sales	-21.2	-66.7	-148.2	-309.1
TOTAL COSTS	341.7	366.3	52.7	-258.2
SAVINGS:				
Military Construction	19.3	19.4	19.4	19.4
Family Housing				
- Construction	0	0	0	0
- Operations	17.3	18.7	45.5	45.4
Operation & Maintenance	4.5	20.9	90.8	130.7
Military Personnel	15.4	61.0	87.4	80.2
Other	0.2	0.2	4.0	8.0
Civilian ES	(32)	(1,479)	(3,185)	(3,657)
Military ES	(975)	(1,664)	(2,143)	(2,269)
TOTAL SAVINGS	56.7	120.2	247.1	283.7
NET IMPLEMENTATION COSTS:				
Military Construction	167.0	216.5	31.3	-19.4
Family Housing				
- Construction	0.7	0	0	0
- Operations	-17.3	-18.6	-45.5	-45.4
Environment	121.7	78.6	28.4	1.0
Operation & Maintenance	42.7	60.8	21.6	-90.7
Military Personnel	-15.4	-61.0	-87.4	-80.2
Other	6.8	36.5	5.4	1.9
Revenues from Land Sales	-21.2	-66.7	-148.2	-309.1
Civilian ES	(32)	(1,479)	(3,185)	(3,657)
Military ES	(975)	(1,664)	(2,143)	(2,269)
NET IMPLEMENTATION COSTS	285.0	246.1	-194.4	-541.9

TABLE 6

BRAC I - CLOSURES & REALIGNMENTS

ARMY FINANCIAL SUMMARY *(Continued)*

	TOTAL FY 1990-1995 (Dollars in Millions)
ONE-TIME IMPLEMENTATION COSTS:	
Military Construction	849.3
Family Housing	
- Construction	.7
- Operations	.1
Environment	308.3
Operation & Maintenance	425.1
Military Personnel - PCS	1.2
Other	125.5
Revenues from Land Sales (-)	-545.2
TOTAL COSTS	1,165.0
SAVINGS	
Military Construction	102.0
Family Housing	
- Construction	0
- Operations	141.9
Operation & Maintenance	252.1
Military Personnel	244.4
Other	12.4
Civilian ES	-
Military ES	-
TOTAL SAVINGS	752.8
NET IMPLEMENTATION COSTS	
Military Construction	747.3
Family Housing	
- Construction	.7
- Operations	-141.8
Environment	308.3
Operation & Maintenance	173.0
Military Personnel	-243.2
Other	113.1
Revenues from Land Sales	-545.2
Civilian ES	-
Military ES	-
NET IMPLEMENTATION COSTS	412.2

TABLE 7

BRAC I - ENVIRONMENTAL DOCUMENTATION

MILESTONES

Environmental Impact Statement	Completion Date
Fort Dix	Jul 90 (A)
Fort Devens-Fort Huachuca	*
Presidio of San Francisco	Jun 91
Fort Sheridan	Feb 91 (A)
Fort Douglas	Jun 91
Fort Meade	Jul 91
Army Material Technology Laboratory	Sep 91
Jefferson Proving Ground	Sep 91
Cameron Station-Fort Belvoir	Sep 91
Umatilla-Navajo-Fort Wingate-Hawthorne AAP	Sep 91
Pueblo Depot Activity	Sep 91
Lexington-Bluegrass Army Depot	Sep 91

Environmental Assessment	Completion Date
Hamilton Army Airfield	Jun 91
USARC Gaithersburg	Jun 91
New Orleans Military Ocean Terminal	Apr 91
Tacony Warehouse	Jun 91
Fort Des Moines	Jun 91
NG Bennett	Oct 90 (A)
DMA Herndon	Jul 91
Coosa River Storage Annex	May 91
Kapalama	Apr 91
Cape St. George	Jun 91
Indiana AAP	May 91
Pontiac Storage	Mar 91
NIKE Aberdeen	Mar 91

Programmatic Environmental Assessment	Completion Date
Stand-Alone Housing	Mar 90 (A)

(A) = ACTUAL
* Fort Devens - On Hold; Ft Huachuca - ROD April 1991

TABLE 8

BRAC I - CLOSURES AND REALIGNMENTS

ENVIRONMENTAL CLEAN-UP COSTS

			FISCAL YEAR (Dollars in Millions)				
INSTALLATION	1990	1991	1992	1993	1994	1995	TOTAL
Alabama AAP	0.854	10.550	12.771	0.100			24.275
AMTL	2.450	2.650	26.400	22.700	11.545	0.500	66.245
Bennett ANG	0.125	0.500					.625
Cameron Station	2.752	1.850	0.230	5.375	4.670		14.877
Cape St. George	0.050						.050
Coosa River		0.350		0.026			.376
DMA-Herndon	0.500	0.100		0.600			1.200
Ft Des Moines	0.400	0.455	0.915	1.000	1.900	0.100	4.770
Ft Devens		0.010	0.010				.020
Ft Dix	0.466	1.801	14.700	2.400			19.367
Ft Douglas		0.600	0.030	0.250	0.850	0.050	1.780
Ft Meade	6.250	6.550	32.390	16.100	0.400		61.690
Ft Sheridan	2.000	1.275	2.390	3.500	2.400		11.565
Ft Wingate	0.010	0.140	1.300	0.600	0.550		2.600
Gaithersburg RC		0.475		0.010			.485
Hamilton AAF	1.100	0.240	0.645	4.225	0.075		6.285
Housing Areas	1.550	2.500	1.250				5.300
Indiana AAP		0.300					.300
Jefferson PG*	0.150	1.500	3.861				5.511
Kapalama	0.830	2.100	0.075				3.005
Lexington	0.110	2.000	1.020	2.000	5.300	0.200	10.630
Navajo	0.100						.100
New Orleans MOT	[illegible]	0.095	0.205	0.014	0.305	0.025	.994
NIKE Aberdeen	0.075	0.670	0.018				.763
Pontiac Storage	0.500	0.200	0.300	1.300	0.100		2.400
Presidio of SF	2.675	2.500	8.970	3.900	0.050		18.095
Pueblo	0.438	7.515	3.270	3.500	0.100	0.100	14.923
Tacony Warehouse	0.450	0.400	0.725	0.625	0.125		2.325
Umatilla	4.031	3.100	10.220	10.440	0.030		27.821
TOTAL	28.216	50.426	121.695	78.625	28.400	0.975	308.337

The costs shown are based upon either current working estimates or actual contract costs. All Enhanced Preliminary Assessments are completed. FY 1992 funds are necessary for remedial investigations and feasibility studies. Management expenses, salaries and travel costs of the U.S. Army Toxic and Hazardous Materials Agency, the Army's restoration agency, are included in the Program Management package.

*Does not include estimates for removal of unexploded munitions and environmental restoration of the range areas.

TABLE 9

BRAC I - IMPLEMENTATION SCHEDULE

(PUBLIC LAW 100-526)

PACKAGE	START FY	FINISH FY
Pueblo Depot Activity, CO	91	95
Lexington-Bluegrass Army Depot, KY	91	95
Army Material Technology Laboratory, MA	91	95
Jefferson Proving Ground, IN	91	95
Umatilla Depot Activity, OR	91	95
AMC Other Properties	91	95
Fort Dix, NJ	90	93
Presidio of San Francisco, CA	91	95
Hamilton Army Airfield, CA	91	95
Fort Sheridan, IL	91	95
Fort Douglas, UT	91	94
Fort Meade, Fort Holabird, CIDC HQ, VA	91	95
Fort Devens-Fort Huachuca, MA/AZ	91	95
Cameron Station, VA	91	95
Stand-Alone Housing	90	93

TABLE 10

US ARMY BASE STRUCTURE

FIGHTING & MANEUVER

BRAGG
CAMPBELL
CARSON
DRUM
HOOD
HUNTER-LIGGETT *
LEWIS
ORD
POLK
RICHARDSON
RILEY
SCHOFIELD BKS
STEWART
WAINWRIGHT

14

MAJOR TNG AREAS
AP HILL *
CHAFFEE *
DIX
GREELY *
INDIANTOWN GAP
IRWIN
McCOY
PICKETT *

8

TRAINING

SCHOOLS
BEN HARRISON
BENNING
BLISS
CARLISLE BKS
EUSTIS
GORDON
HUACHUCA
JACKSON
KNOX
LEAVENWORTH
LEE
LEONARD WOOD
McCLELLAN
McNAIR
MONTEREY
RUCKER
SAM HOUSTON
SILL
WEST POINT

19

COMMAND &CONTROL

BELVOIR
DEVENS
GILLEM
HAMILTON
McPHERSON
MEADE
MONROE
MYER
RITCHIE
SHAFTER
ST LOUIS SPT CEN

11

INDUSTRIAL

RDT&E
ABERDEEN
BELVOIR FUELS *
COLD REGIONS LAB (NH) *
DETRICK
DETROIT
DUGWAY
ETHAN ALLEN *
FAIRBANKS *
GERSTLE *
GREEN RIVER TEST SITE *
HARRY DIAMOND
KEWEENAW *
MONMOUTH
NATICK
PICATINNY
REDSTONE
VINT HILL FARMS
WHITE SANDS
YUMA

19

DEPOTS
ANNISTON
BLUE-GRASS
LETTERKENNY
NEW CUMBERLAND
PUEBLO
RED RIVER
SACRAMENTO
SAVANNA
SENECA
SHARPE
SIERRA
STANLEY ACTIVITY *
TOBYHANNA
TOOELE
UMATILLA *

15

PRODUCTION FACS
LAWNDALE *
PINE BLUFF
ROCK ISLAND
ROCKY MTN *
SAGINAW *
STRATFORD ENG *
TARHEEL *
WATERVLIET
WELDON SPRINGS * CHEM PLANT

9

AMMUNITION PLTS *
BADGER AAP *
CORNHUSKER AAP *
HAWTHORNE AAP
HAYS AAP
HOLSTON AAP
IOWA AAP
JOLIET AAP *
LAKE CITY AAP
LONE STAR AAP
McALESTER AAP
MILAN AAP
NEWPORT AAP
RADFORD AAP
RAVENNA AAP *
RIVERBANK AAP *
ST LOUIS AAP *
TWIN CITIES AAP *
VOLUNTEER AAP *

PORTS
BAYONNE
OAKLAND
SUNNY POINT

18

3

DEFENSE

NSA, DNA, & DLA
16 PROPERTIES SUPPORTING

16

OTHER

AIR DEFENSE
CEMETERIES
COM/RADAR
HOSPITALS
REC AREAS
STAND ALONE HOUSING
MISC.

82

CORPS OF ENGINEERS

ALBUQUERQUE
ANCHORAGE
BALTIMORE
BUFFALO
CHARLESTON
CHICAGO
DETROIT
FT. WORTH
GALVESTON
HONOLULU
HUNTINGTON
HUNTSVILLE
JACKSONVILLE
KANSAS CITY
LITTLE ROCK
LOS ANGELES
LOUISVILLE
MEMPHIS
MOBIILE
NASHVILLE
NEW ORLEANS
NEW YORK
NORFOLK
OMAHA
PHILADELPHIA
PITTSBURG
PORTLAND
ROCK ISLAND
SACRAMENTO
SAN FRANCISCO
SAVANNAH
ST. LOUIS
ST. PAUL
SEATTLE
TULSA
VICKBSBURG
WALLA WALLA
WALTHAM
WILMINGTON

39

ARMY RESERVE

1511

ARMY NATIONAL GUARD

141

THIS ASSUMES FULL EXECUTION OF BRAC I AND THOSE BRAC II PROPOSALS THAT DO NOT TRIP THE 2687 THRESHOLDS. THOSE BASES AND FACILITIES HAVE BEEN REMOVED FROM THIS LIST.

* THOSE WITH LESS THAN 300 CIVILIAN AUTHORIZATIONS

TABLE 11

SUMMARY OF RECOMMENDATIONS

CLOSURES

* CLOSE FORT DEVENS, MASSACHUSETTS, AND RETAIN FACILITIES AND TRAINING AREAS FOR THE RESERVE COMPONENT (10th SPECIAL FORCES GROUP TO FORT CARSON)

CLOSE FORT DIX, NEW JERSEY, AND RETAIN FACILITIES AND TRAINING AREAS FOR THE RESERVE COMPONENT

* CLOSE FORT BENJAMIN HARRISON, INDIANA, (EXCEPT BUILDING 1) (ESTABLISH SOLDIER SUPPORT CENTER AT FORT JACKSON, SOUTH CAROLINA). U.S. ARMY RECRUITING COMMAND (ORIGINALLY DESTINED FOR FORT BENJAMIN HARRISON) TO FORT KNOX, KENTUCKY

CLOSE FORT McCLELLAN, ALABAMA (CREATE MANEUVER SUPPORT CENTER AT FORT LEONARD WOOD, MISSOURI)

CLOSE FORT ORD, CALIFORNIA (7th INFANTRY DIVISION TO FORT LEWIS, WASHINGTON)

CLOSE SACRAMENTO ARMY DEPOT (ELECTRONIC MAINTENANCE WORKLOAD TO OTHER DEPOTS)

CLOSE FT CHAFFEE, ARKANSAS, AND RETAIN FACILITIES AND TRAINING AREAS FOR THE RESERVE COMPONENT (JOINT READINESS TRAINING CENTER TO FORT POLK, LOUISIANA)

CLOSE HARRY DIAMOND WOODBRIDGE RESEARCH FACILITY, WOODBRIDGE, VIRGINIA

* MODIFIES BRAC I

REALIGNMENTS

ROCK ISLAND ARSENAL, ILLINOIS -- MOVE ARMAMENT, MUNITIONS, AND CHEMICAL COMMAND (-) TO REDSTONE ARSENAL, ALABAMA

AVIATIONS SYSTEMS COMMAND AND TROOP SUPPORT COMMAND -- MERGE IN ST. LOUIS, MISSOURI

CREATE COMBAT MATERIAL RESEARCH LABORATORY AT ADELPHI, MARYLAND, WITH SUPPORTING ELEMENTS AT ABERDEEN PROVING GROUNDS, MARYLAND AND WHITE SANDS, NEW MEXICO. ACTIVITIES AT THE FOLLOWING LOCATIONS ARE AFFECTED:

* - ARMY MATERIAL TECHNOLOGY LAB (DESTINATION CHANGE)
- HARRY DIAMOND WOODBRIDGE RESEARCH FACILITY-WOODBRIDGE, VIRGINIA
- FORT MONMOUTH, NEW JERSEY
- WHITE SANDS MISSILE RANGE, NEW MEXICO
- ARMY RESEARCH INSTITUTE, VIRGINIA
- FORT BELVOIR, VIRGINIA

* FT DETRICK, MARYLAND -- DISESTABLISH LETTERMAN ARMY INSTITUTE OF RESEARCH (ORIGINALLY DESTINED FOR FORT DETRICK) AND COLLOCATE FUNCTIONS WITH OTHER SERVICES

FORT POLK, LOUISIANA -- REALIGN THE JOINT READINESS TRAINING CENTER (CURRENTLY AT FORT CHAFFEE) TO FORT POLK, LOUISIANA. THE 5th INFANTRY DIVISION WILL MOVE FROM FORT POLK TO FORT HOOD, TEXAS

LETTERKENNY ARMY DEPOT, PENNSYLVANIA -- REALIGN DEPOT SUPPORT COMMAND (DESCOM) FROM LETTERKENNY, PENNSYLVANIA TO ROCK ISLAND. *REALIGN MATERIAL READINESS SUPPORT ACTIVITY (MRSA) AND LOGISTICS CONTROL ACTIVITY (LCA) TO REDSTONE ARSENAL, ALABAMA

* MODIFIES BRAC I

Senator DIXON. Thank you, Ms. Livingstone. Miss Schafer.

STATEMENT OF HON. JACQUELINE E. SCHAFER, ASSISTANT SECRETARY OF THE NAVY, INSTALLATIONS AND ENVIRONMENT

Miss SCHAFER. Thank you very much, Mr. Chairman. I am Jacqueline Schafer, Assistant Secretary of the Navy for Installations and Environment, and I appreciate this opportunity to discuss with you this afternoon the Department of the Navy's fiscal years 1992 and 1993 military construction, family housing, and real property maintenance programs. Like the other services and the Department of Defense, we genuinely appreciate the strong support that this committee has provided in the past years for our military construction and family housing programs. In the last 3 years you have supported funding levels that have enabled us to revitalize our shore establishment and provide support for new missions as they arose.

Our military construction, family housing, and maintenance of real property requests are lower than last year's. Let me emphasize, however, that these lower numbers reflect the present austere fiscal environment and not a lack of commitment to provide essential facilities for the operating forces and an improved quality of life for our sailors and marines.

Let me now outline our military construction and family housing programs for the years under consideration. In fiscal years 1992 and 1993 we are requesting $658 million and $745 million, respectively, for our Navy and Marine Corps military construction programs. Although considerably lower than the fiscal year 1991 request, direct comparisons with last year must take into account changes in our fiscal years 1992 and 1993 budget accounts. For example, the military construction appropriation request excludes funds which are being requested in the defense appropriations bill under the Defense Business Operations Fund, the DBOF. The authorizations for these projects are being requested in the fiscal years 1992–1993 military construction authorization bill.

For the first time this military construction budget request also includes $572 million in fiscal year 1993 for major repair projects costing over $15,000 and minor construction projects costing less than $200,000. The transfer of these funds from real property operations and maintenance accounts to the military construction account will place all facility investments under the same appropriation.

I will now briefly discuss the unique composition of our 1992–1993 construction programs. We have included $114 million in our fiscal year 1992 budget to provide quality of life facilities, a $24 million increase over the fiscal year 1991 level. These projects include 17 bachelor housing and mess hall projects, 5 child development centers, and one religious education facility. Enactment of this budget will provide our people with over 2,700 new or modernized living spaces and 6 new or modernized messing facilities.

The average age of the Department of the Navy's facilities is 43 years. This requires us to pay increasing attention to modernization or replacement of existing facilities. In recognition of this we have budgeted $227 million for our shore facilities life extension program, or SHOREFLEP. Despite declining budgets we intend to continue emphasis on this program to address our replacement and modernization needs. We are requesting $75 million for military construction projects outside the continental United States. Such facilities support our forward maritime operations and enhance our power projection capability, but these funds are limited.

Our fiscal year 1993 military construction authorization request includes $572 million for real property maintenance that had previously been funded from Operation and Maintenance accounts. The need for these funds has never been greater. With our minimal construction program we must have the requested repair and minor construction funding to assure that our existing facilities remain operational. In fact, the backlog of needed facility repairs will continue to grow despite funding levels requested for 1992 and 1993.

Finally, our fiscal year 1993 budget request includes $214 million for the type and scope of a military construction program that has traditionally been funded with military construction appropriations. This includes planning, design and construction for critical safety, health, and environmental or other essential needs. Examples include a fire fighting training facility at Memphis, Tennessee; a sewage treatment plant upgrade at Camp Pendleton, California; and a nonpotable water system improvement at 29 Palms, California.

As you know, the Deputy Secretary of Defense lifted the freeze on military construction projects last month at the time the defense base closure and realignment recommendations were submitted to the Commission on Base Closure and Realignment. In lifting the freeze, the Deputy Secretary imposed a new system of controls to ensure that the new construction conforms to long-term force reduction plans. Under the new system, the approval of the Deputy Secretary of Defense is required for projects at bases which the Secretary of Defense recommended be closed or realigned, or are located at overseas installations in Europe, Japan, and the Republic of Korea, or in the Washington, D.C. area. The Department of the Navy projects elsewhere can proceed with the approval of the Secretary of the Navy.

Let me finally address our family housing program. We are requesting $880 million for family housing in fiscal year 1992, a 1.6 percent increase over our fiscal year 1991 program. Our fiscal year 1993 request is $793 million. Our fiscal year 1992 new construction program provides 510 new homes at three locations within the United States and replacement of 278 homes at Naval Station Guantanamo Bay in Cuba. These homes are located in areas where there is no adequate community housing or where it is unaffordable. It also includes funding to demolish 396 old asbestos filled homes in Naval District Washington, in the Belleview area of Southeast Washington, that are no longer economical to repair. They will be replaced by future new construction.

The fiscal years 1992 and 1993 program reflects our emphasis on improving the quality of life for our military members and for their families. We prioritized our total requirements to first provide for essential services, second provide enhanced customer services through improved housing referral and other programs, third to revitalize our aging family housing assets, and fourth, we will work to eliminate the shortfall of family housing through combined military construction and public-private venture efforts.

We are requesting $73 million in fiscal year 1992 and $109 million in fiscal year 1993 to support our build-to-lease, that is the Section 801 projects, as well as ongoing foreign leasing programs. Of the Navy's 6,200 build-to-lease units authorized, 800 are now occupied. Another 1,802 units are under contract and are now being built, and we expect families to begin moving into these units later this year. Planning efforts are continuing for the remaining 3,598 units, which we are working to have under contract by the end of this fiscal year.

We are also prepared to execute 1,350 units under the Section 802 rental guarantee program. Three hundred units at Pearl Harbor, 300 units at Washington, D.C., 150 at Great Lakes, Illinois, and 600 units at Camp Pendleton, California.

Authorization for the Sections 801 and 802 housing expires this year. These programs provide an important alternative to traditional military construction, particularly in times of limited construction funding.

As you know, and as Mr. McMillan has expressed, there has been a great deal of discussion concerning scoring on both Sections 801 and 802 projects. The purpose of scoring is to identify and quantify the undefined future obligations of the U.S. Government. While we agree that certain Section 801 projects meet the OMB criteria for scoring, a distinction should be made for those Section 801 projects that are built on privately owned land.

In addition, we firmly believe that Section 802 projects meet neither the letter nor the spirit of scoring. Unlike Section 801, Section 802 units are leased directly to the sailor, not the Navy. The government does not acquire any present or future interest in the housing, and the sailor, not the Navy, pays the rent to the developer using the sailor's housing allowances. Section 802 creates no future government obligation. We welcome the opportunity to discuss these scoring issues more fully with your committee and the staff.

In the end, the fundamental issue is to resolve our chronic family housing shortfalls. Despite force structure reductions, our housing shortfalls continue, particularly for our junior enlisted personnel. We have been unable to resolve the shortfalls using traditional family housing construction funds, so I strongly urge that you approve our four Section 802 projects and ask that you extend both Sections 801 and 802 authorizations.

In summary, Mr. Chairman and members of the committee, let me say that the military construction and family housing authorization request reflects adjustments to facility requirements based on force structure reductions and declining budgets. We have emphasized quality of life issues for our people, we have funded critical environmental health and safety projects, we have sought to maintain our aging shore establishment, and provided facilities to maintain our operational readiness to fulfill our maritime mission in support of national policy. I urge your favorable consideration of our overall program, Mr. Chairman. That concludes my prepared statement. Thank you.

[The prepared statement of Miss Schafer follows:]

Prepared Statement of Hon. Jacqueline E. Schafer, Assistant Secretary of the Navy, Installations and Environment

Mr. Chairman and distinguished members of the committee, I am Jacqueline E. Schafer, Assistant Secretary of the Navy (Installations and Environment). I appreciate this opportunity to discuss with you the Department of the Navy's fiscal years 1992 and 1993 military construction, family housing, and real property maintenance programs.

We genuinely appreciate the strong support the committee has provided in past years for our military construction and family housing programs. In the last 3 years, you have supported funding levels consistent with our budget requests. Thus, we have been able to revitalize our shore establishment and provide support for new missions. Moreover, the modern, high-quality facilities you have authorized have contributed significantly to improved mission capability, productivity, readiness, and sustainability, and, most significantly, have had an encouraging and visible effect on morale and retention.

Our military construction, family housing, and maintenance of real property requests are lower than last year's. Let me emphasize, however, that these lower numbers reflect the present austere fiscal environment, and not a lack of commitment to provide essential facilities for the operating forces and an adequate quality of life for our sailors and marines. We have made every effort to ensure, within available funding levels, that our budget includes only those requirements essential in fiscal years 1992 and 1993.

Let me now outline our military construction and family housing programs for the years under consideration:

MILITARY CONSTRUCTION

In fiscal years 1992 and 1993, we are requesting $658 million and $745 million, respectively for our Navy and Marine Corps military construction programs. Although considerably lower than our fiscal year 1991 request of $1,113 million, direct comparisons with last year must take into account changes in our fiscal years 1992 and 1993 budget accounts. For example, the Military Construction Appropriation request excludes $222 million for construction in fiscal year 1992 and $41 million in fiscal year 1993, which are being requested in the Defense Appropriations bill under the newly proposed Defense Business Operations Fund (DBOF). On the other hand, authorizations for the projects are being requested in the fiscal years 1992-93 Military Construction Authorization bill.

The Secretary of Defense established the DBOF to encourage and foster better allocation of resources. In effect, DBOF adopts the capital budgeting techniques used by private industry. At this point, DBOF only includes industrially funded activities. With our large number of industrial activities, the Navy has the lion's share of DBOF. Projects at our shipyards, weapons stations, public works centers, supply centers, aviation depots, ordnance stations, and surface warfare centers constitute over half of the total Department of Defense request for military construction to be funded by the DBOF.

For the first time, this military construction budget request includes $572 million in fiscal year 1993 for major repair projects costing over $15,000 and minor construction projects costing less than $200,000. The transfer of these funds from real property operations and maintenance accounts to the military construction account will place all facility investments under the same appropriation.

The following table summarizes the Navy's fiscal years 1992 and 1993 military construction authorization and appropriation requests.

[Dollars in millions]

	Fiscal year 1992	Fiscal year 1993
Conventional Milcon	$658	$173
Real Property Maintenance	0	572
Total Milcon Appropriation Request	658	745
Defense Business Operations Fund	222	41
Total Milcon Authorization Request	880	786

I will now briefly discuss the unique composition of our fiscal years 1992 and 1993 construction programs. I will include our DBOF projects, since we are seeking military construction authorization for these facilities even though the funding is being requested in the Defense Appropriations bill.

Our fiscal year 1992 authorization request of $880 million is $233 million less than our fiscal year 1991 request of $1,113 million. This reduction reflects declining resources and a reduced force structure. Nonetheless, we have developed a balanced program that provides the minimum number of essential facilities for new missions and weapons systems. It also provides funding above that obtained in fiscal year 1991 for facilities that directly enhance quality of life, the shore facilities life-extension program, and our ability to maintain maritime superiority in a forward deployed posture. Let me address these in more detail.

We have included $114 million in our fiscal year 1992 budget to provide quality of life facilities, a $24 million increase over our fiscal year 1991 level of $90 million. Projects include 17 bachelor housing/mess hall projects ($100 million), five child development centers ($13 million), and one religious education facility ($1 million). This compares to 10 bachelor housing/mess hall projects ($77 million), three child development centers ($8 million), and one religious education facility ($6 million) funded last year. Enactment of this budget request will provide our people with over 2,700 new or modernized living spaces and six new or modernized messing facilities.

The average age of our shore facilities is 43 years. This requires us to pay increasing attention to modernization or replacement of existing facilities. In recognition of this, we have budgeted $227 million for our Shore Facilities Life Extension program (SHOREFLEP), compared with $118 million last year. Despite declining budgets, we intend to continue emphasis on SHOREFLEP to address our replacement and modernization needs.

Secretary Baker, Secretary Cheney, and General Powell have all testified on the need to maintain a presence in the Mediterranean and post-war Persian Gulf, and a maritime force in the Pacific. Our $75 million request for military construction projects outside the continental United States supports these needs. Last year, our request for such projects was reduced in Congress from $47 million to $31 million. I ask that you give careful consideration to this year's larger request, which includes essential projects at key overseas locations in Italy, Bahrain, and Iceland. It also includes projects in the United States Territories of Guam and Puerto Rico. Such facilities support our forward maritime operations and enhance our power projection capability.

Our fiscal year 1993 Military Construction Authorization request of $786 million has two unique features. First, as mentioned earlier, it includes $572 million for

Real Property Maintenance that had previously been funded from operations and maintenance accounts. This transfer could potentially create administrative problems if the projects are to be authorized and appropriated on a line item basis. There are potentially tens of thousands of unique Navy and Marine Corps major repair and minor construction projects which we would have to document and budget for separately. This would obviously become an expensive and unwieldy administrative nightmare. The services are working with OSD to determine the details of how the realigned program could best work. The process must remain simple and flexible.

Let me add that the need for these funds has never been greater. With our minimal construction program, we must have the requested repair and minor construction funding to ensure that our existing facilities remain operational. In fact, the backlog of needed facility repairs continue to grow, despite funding levels for fiscal years 1992 and 1993.

Second, our fiscal year 1993 budget request includes only $214 million for the type and scope of a military construction program that has traditionally been funded with military construction appropriations. As stated in the President's budget, "the construction request in fiscal year 1993 has been reduced to a minimum pending completion of the study of the realignment and consolidation of the naval shore establishment required by the Defense Base Closure and Realignment Act of 1990." Accordingly, this portion of our fiscal year 1993 request includes $80 million for planning and design, and $134 million to construct those projects that support critical safety, health, environmental or other essential needs. Examples include: a fire fighting training facility at Memphis, TN; a sewage treatment plant upgrade at Camp Pendleton, California; and a non-potable water system improvement at Twenty-nine Palms, California. Note that $41 million of the $134 million cited above is funded under the DBOF.

As you know, the Deputy Secretary of Defense lifted the freeze on military construction projects last month at the time we were ready to submit our base closure and realignment recommendations to the Commission on Base Closure and Realignment. In lifting the freeze, the Deputy Secretary imposed new controls to ensure that new construction conforms to long-term force reduction plans. Under the new system, approval of the Deputy Secretary is required for projects at bases which the Secretary of Defense has recommended be closed or realigned, at overseas installations in Europe, Japan, or the Republic of Korea, and in the Washington, DC area. The Department of the Navy projects elsewhere can proceed with the approval of the Secretary of the Navy. This means, for the Department of the Navy, that our fiscal year 1991 and prior programs are proceeding, except as noted above.

Let me now address our Family Housing program.

FAMILY HOUSING

We are requesting $880 million for family housing in fiscal year 1992, a 1.6 percent increase from our fiscal year 1991 program of $866 million. Our fiscal year 1993 request is $793 million, an 8.5 percent decrease from our fiscal year 1991 appropriation.

Our fiscal year 1992 new construction program provides 510 new homes at three locations within the United States and replacement of 278 homes at Naval Station, Guantanamo Bay, Cuba. These homes are located in areas where there is no adequate community housing, or where it is unaffordable. In fiscal year 1992 we are continuing our longterm goal of replacing old, worn-out homes and facilities that are no longer economical to repair or retain. This includes funding to demolish 396 units in Naval District Washington. We are requesting the demolition funds 2 years in advance of anticipated replacement by new construction to ensure sufficient time to clear the site and dispose of all asbestos. The construction budget also provides for two community centers and one family housing office.

The fiscal years 1992 and 1993 programs reflect our emphasis on improving the quality of life for our military members and their families. We have prioritized our total requirements to first, provide for essential services; second, provide enhanced customer services through improved housing referral and other programs; third, revitalize our aging family housing assets; and fourth, eliminate the shortfall of family housing through combined military construction and public/private venture efforts. We have modestly increased funding for our operating and utility accounts by $32 million in fiscal year 1992 and an additional increase of $16 million in fiscal year 1993.

Our plan also includes $55 million in fiscal year 1992 and $2 million in fiscal year 1993 for the Improvements Program to provide Navy and Marine Corps families with places to live that compare favorably with those found in the local community. While the plan reflects the President's reduced fiscal year 1993 construction request, we anticipate higher funding levels in future budgets.

We are requesting $73 million in fiscal year 1992 and $109 million in fiscal year 1993 to support our build-to-lease (Section 801) projects, as well as the ongoing foreign leasing program. Of the Navy's 6,200 build-to-lease units authorized under title 10 U.S.C. 2828, 800 are now occupied: 300 at Norfolk, VA; 200 at Mayport, FL; and 300 at Earle, NJ. Another 1,802 units are under contract and are now being built: 1,202 at Staten Island, NY; and 600 at Washington, DC. We expect families to begin moving into these units later this year. Planning efforts continue for the remaining 3,598 units, which we expect to have under contract by the end of this fiscal year.

We also are prepared to execute 1,350 units under the Section 802 rental guarantee program: 300 units in Pearl Harbor, HI; 300 units in Washington, DC; 150 units in Great Lakes, IL, and 600 units in Camp Pendleton, CA. We are planning projects at other locations in the United States for award in fiscal year 1992.

Authorization for Sections 801 and 802 housing expires this year. These programs accelerate delivery of housing to our military families, reduce Federal Government outlays, utilize private sector capital, and have often proven advantageous to the local community tax base. They provide an important alternative to traditional military construction, particularly in times of limited construction funding. We are pleased with these programs.

As you know, there has been a great deal of discussion concerning "scoring" both Section 801 "Build-to-Lease" and Section 802 "Rental-Guarantee" projects. The purpose of scoring is to identify and quantify undefined future obligations of the U.S. Government. While we agree that certain Section 801 projects meet the OMB criteria for scoring, a distinction should be made for those Section 801 projects built on privately owned land that meet the definition of an existing lease and thus, according to OMB guidelines, need not be scored. When a Section 801 project is built on privately owned land, the government does not acquire any interest in the housing.

In addition, we firmly believe that Section 802 projects meet neither the letter nor the spirit of scoring. Unlike Section 801, Section 802 units are leased directly to the sailor, not the Navy; the government does not acquire any present or future interest in the housing; and the sailor, not the Navy, pays the rent to the developer using the sailor's housing allowance [basic allowance for quarters/variable housing allowance (BAQ/VHA)]. Section 802 creates no future government obligation.

We disagree strongly with the recent Congressional Budget Office (CBO) interpretation on scoring these Section 802 projects. We welcome an opportunity to discuss, these scoring issues more fully with your committee.

In the end, the fundamental issue is to resolve our chronic family housing shortfalls. Despite force structure reductions, our housing shortfalls continue, particularly for our junior enlisted personnel. We have been unable to resolve the shortfall using traditional family housing construction funds. Offbase Section 801, and Section 802 projects offer important alternatives to provide housing using private sector funding. I strongly urge that you approve our four Section 802 projects, and ask that you extend both Sections 801 and 802 authorizations.

CONCLUSION

In summary, Mr. Chairman and members of the committee, let me note that the military construction and family housing authorization requests before you include new initiatives that will change the way we fund facility investments. It also reflects adjustments to facility requirements based on force structure reductions and declining budgets. Within the levels of funding available to us, we have: emphasized quality of life issues for our people; funded critical environmental, health and safety projects; sought to maintain our aging shore establishment; and provided facilities to maintain our operational readiness to fulfill our maritime mission in support of national policy. I urge your favorable consideration of our program.

That concludes my statement. I will gladly address any questions you may have.

Senator **Dixon**. Thank you. Mr. Boatright.

STATEMENT OF JAMES F. BOATRIGHT, DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE, INSTALLATIONS

Mr. **Boatright**. Thank you, Mr. Chairman. I appreciate the opportunity to appear before you today to discuss the Air Force military construction program for fiscal years 1992 and 1993. I have prepared a formal statement for you, as requested. In the interest of time I will not summarize or repeat the information contained in the formal statement, and just enter it into the record. I believe the statement contains all of the factual information required by this committee.

Instead I would like to focus on two areas which are very important to the Air Force. One is the family housing improvement program, and the other is the transfer of certain O&M funding for major repairs and minor construction into the Milcon accounts. For our overall military family housing program we have requested just slightly over $1 billion in fiscal year 1992, and slightly under $1.2 billion for fiscal year 1993. For our housing improvement program we are requesting approximately $141 million in 1992 and $168 million in fiscal year 1993.

Our whole house, whole neighborhood revitalization program has been very successful, but our progress is much too slow and many of the housing units will completely wear out before we can get them fixed. This program updates worn out kitchens and bathrooms, replaces obsolete utility systems, provides additional living space, and generally brings these older homes up to today's contemporary standards.

All of the necessary maintenance, repair, and improvements are done at the same time. For an average cost per unit of approximately $60,000 we extend the life of these houses for another 25 years. As you can see, this is very attractive financially when compared with replacement cost. In addition, annual O&M costs are virtually eliminated for the first 5 years. There are other important pay offs, too, better quality of life which greatly increases retention of our highly trained personnel, which in turn results in a substantial cost avoidance for expensive training. These are the reasons the housing improvement program is our top priority discretionary construction program.

The Air Force has some 67,000 units in its inventory which require this major revitalization. Unfortunately, at our present budget levels it will take 22 years to complete the program. At this pace we simply cannot get ahead of the problem, therefore we must find a way to accelerate this program. The obvious solution is to double the annual funding over the next 11 years. However, as we all know, with the projected budget levels that would be a most difficult task.

As a result, we believe mortgage financing would be a very prudent way to supplement and accelerate this program. Such an approach was used very successfully in the past to construct many of our housing units. The Air Force no longer has a mortgage debt, and thus a new mortgage finance program would appear to be an attractive solution. However, budget scoring rules make this approach very unattractive because the total payment stream to satisfy the mortgage application must be scored in the initial year of the budget. The Air Force is somewhat frustrated in this matter because we know how important family housing is to the retention of quality people, but we cannot seem to find a way to accelerate the program.

Also, as responsible stewards for this large inventory of housing, it concerns us to watch it wear out before it can get fixed. Nevertheless we will continue our efforts to increase the funding in this program to the extent we can each year within the overall budget constraints. We appreciate the continued support of this committee for this most important construction program.

Turning now, Mr. Chairman, to the second area of concern for the Air Force, I would like to discuss the threshold level for congressional approval in the O&M funding transfer proposal. Starting in fiscal year 1993, DOD has proposed moving a significant portion of real property maintenance, mainly the portion regarded as capital investment, from the O&M account to the Milcon account. Under this proposal, this capital investment funding is defined as all repair over $15,000, which is called major repair, and all minor construction, whether these are accomplished by contract or inhouse.

My understanding of this proposal is that the funding in the Milcon appropriation will remain unspecified, just as it currently is funded in the O&M appropriation. We see definite merit in this proposal, but believe the threshold of $15,000 is too low. Installation commanders absolutely must have a reasonable amount of management flexibility to react to unexpected requirements, emergencies, changing priorities, mission changes, unforeseen failures, and so forth. At present, installation commanders use O&M funds for the majority of their day-to-day operations, including facility maintenance and repair. If we take much of this O&M facility money out of this account, we will have taken that much flexibility away from our installation commanders. Therefore, we believe it is more appropriate to make the break between O&M and Milcon accounts at the current minor construction level of $200,000.

In fact, when the Military Construction Codification Act was under consideration by the Congress in 1982, a proposal was made to include all minor construction of the Milcon account. According to this committee's own report to that legislation, the proposal was rejected because it would have eliminated essential management flexibility of the installation commander. We believe the facts that led to that conclusion then are the same today.

Our second concern with this proposal deals with what level would be required for line item review by the Congress. We must keep in mind that the level chosen will have a major impact on the work load of the staffs of the military departments who prepare the paperwork for approval packages and the staffs of OSD and OMB who must review them. In addition, we should consider the workload implications for the committee members and their staffs. For example, line item review for repair projects over $15,000 and for all minor construction would require processing over 15,000 separate Air Force projects each year for potential congressional review.

We understand the House Armed Services Committee subcommittee proposal was to raise the $15,000 threshold to $50,000, plus all minor construction. Even at that level, there would still be over 10,000 Air Force projects for the committee to approve each year. The workload from other military departments would be in addition to this. The members are best able to assess the workload implications for the committee and its staff.

For the Air Force, I fear that a new workload would require creation of a new bureaucracy to deal with the additional paperwork that would be required. It certainly would cause major delays in conducting business throughout the chain of command. This extra administrative burden and delay would be very troublesome, and it would not add any value whatsoever to the final end product. In reality it would result in micromanagement, which would encumber our own management efforts and would be inconsistent with our efforts to streamline and downsize the management activities of the Air Force.

Once again, please understand we are not opposed to the consolidation of capital investment projects into the Milcon account. We are only raising questions about the level at which this occurs because of our concern over commander flexibility and the amount of work required for line item review.

Thank you, Mr. Chairman. This concludes my remarks. I will be most happy to answer any questions that you or the other members may have.

[The prepared statement of Mr. Boatright follows:]

PREPARED STATEMENT BY JAMES F. BOATRIGHT, DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS)

INTRODUCTION

Mr. Chairman and members of the committee: Good morning. I appreciate the opportunity to appear before you this morning to discuss the Air Force Military Construction and Family Housing program. In my testimony today I will present details of the Air Force military construction budget request for fiscal years 1992 and 1993.

OVERVIEW

I would like to thank the committee for its continuing support of the Air Force's Military Construction programs. These are difficult times for us in the Air Force Milcon business as we press forward with programs designed to support national policies and objectives, maintain a balanced Milcon program which will support both new weapons systems and the people who make them work, and continue our efforts to protect the environment as well as respond to congressional direction.

The Air Force is sensitive to the need to trim budget requests. Our fiscal years 1992-1993 authorization requests are significantly reduced compared to previous years. For fiscal year 1992, our total authorization request for Milcon and military family housing is $2.143 billion, a reduction of $192.7 million compared to fiscal year 1991 request. We are requesting $1.062 billion for military construction and $1.082 billion for military family housing. The Milcon segment includes construction for new aircraft, command, control, communications and intelligence, and space systems, as well as revitalization of our facility infrastructure.

The Air Force request for actual Milcon projects in fiscal year 1993 is only $288 million, a much lower amount than in previous years. While it would appear initially that we have requested $781 million for Milcon in that year, in fact $493 million of that amount is for real property maintenance, repair and minor construction projects under $200 thousand which previously have been funded through the operation and maintenance and RDT&E accounts. These former "O&M" accounts were recategorized as Milcon for the first time in the fiscal year 1993 request. The severely reduced actual Milcon request of $288 million in fiscal year 1993 reflects the Department of Defense "Milcon pause." The $288 million requested for construction projects in fiscal year 1993 reflects only those which have environmental, health or safety impacts, are required for treaty compliance, support new mission beddowns or are phased projects already under contract.

Our fiscal year 1992 request still represents a balanced, though constrained, program which is responsive to Defense and Air Force priorities and objectives, as well as to congressional emphasis and direction. Air Force priorities focus on readiness requirements, and also emphasize personnel and quality of life needs, modernization of strategic forces, restructuring of conventional forces, environmental protection and maintenance of our technology and production base.

In response to congressional direction last year, we have increased emphasis on burdensharing and have substantially reduced our overseas Milcon requests for fiscal years 1992 and 1993. The projects we are requesting have been carefully screened to be sure they are needed for essential military requirements that will survive this period of great change.

I would like to address now the programs in both fiscal years for current mission and new mission Milcon, as well as military family housing.

NEW MISSION MILCON

We continue to separate our Milcon program into two elements called new and current mission. The new mission portion of the request supports deployment of new weapon systems, force structure changes and readiness enhancements. This segment enhances our warfighting capability. New mission Milcon projects constitute 60 percent of the fiscal year 1992 military construction request at $639 million. This represents a $180 million reduction compared to the fiscal year 1991 authorization request. The fiscal year 1993 new mission request of $253 million is 88 percent of the construction projects requested, but only 32 percent of the authorization request, which now includes maintenance, repair and minor construction projects that were previously funded in the operations and maintenance account.

The new mission Milcon request includes facility projects to continue beddown of the B-2 bomber, continuation of facility construction to support the C-17 aircraft and continuation of beddown of the F-117. We are also seeking the remaining authorization for appropriation and appropriation for the final increment of the large rocket test facility, J-6 at Arnold Engineering and Development Center, Tennessee.

B-2 BOMBER

Our construction to support the initial B-2 deployment to Whiteman Air Force Base, Missouri began with the fiscal year 1988 Milcon program and continues with our fiscal years 1992 and 1993 request. Follow-on locations will be announced in conjunction with the submission of the President's budget containing the first year of Milcon for each of these locations. Depot maintenance for the B-2 bomber will be performed at Tinker Air Force Base, Oklahoma.

Congress supported $84.8 million in fiscal year 1988, $59.5 million in fiscal year 1989 and $65.5 million for B-2 facilities at Whiteman Air Force Base and $31.8 million for facilities at Tinker Air Force Base in fiscal year 1990. For fiscal year 1991, Congress supported $80.0 million, including $58.6 million for Whiteman Air Force Base and $21.4 million for Tinker Air Force Base. Our fiscal year 1992 request is $49.5 million at Whiteman Air Force Base. This request is in line with the revised B-2 acquisition program approved by the Secretary of Defense. The fiscal year 1993 authorization request for Whiteman Air Force Base is $82.9 million. Our plan is to finish Whiteman Air Force Base in fiscal year 1993. There is nothing programmed at Tinker Air Force Base for either fiscal year 1992 or 1993.

C-17 AIRCRAFT

Our fiscal year 1992 request of $77 million provides facilities at Charleston Air Force Base, South Carolina and Altus Air Force Base, Oklahoma, to support the C-17 program to modernize and enhance the Air Force's strategic and tactical airlift capabilities. Specifically, the request includes two projects totaling $21.9 million at Charleston Air Force Base, and $55.1 million for five projects at Altus Air Force Base.

Congress authorized $7.3 million in fiscal year 1989, $4.65 million in fiscal year 1990 and $29.6 million in fiscal year 1991 to support facility construction at Charleston and Altus Air Force Bases.

LARGE ROCKET TEST FACILITY (J-6)

The Arnold Engineering Development Center, Tennessee, provides the only national capability for testing rocket motors at altitude. The J-6 facility provides the capability to safely test large motors with new propellants at a thrust of up to 500,000 pounds at a simulated altitude of 100,000 feet. The new generation of rocket motors, such as the Peacekeeper, require thrust capabilities up to 350,000 pounds. The future generation of rocket motors will require even higher thrusts.

During fiscal year 1989, the Congress authorized $183 million, while providing appropriations in the amount of $50 million to begin the first phase of the 3-year construction program. Congress appropriated $66 million in fiscal year 1990 with an additional authorization of $43 million for a revised project authorization of $226 million. In fiscal year 1991, Congress authorized $66 million and appropriated $30 million. Our fiscal year 1992 authorization for appropriation request of $44 million and appropriation request of $80 million will allow us to complete the project.

LAND ACQUISITION VANDENBERG AIR FORCE BASE, CALIFORNIA

For fiscal year 1992, the Air Force is requesting $80 million to acquire land interests south of Vandenberg Air Force Base, California, which will limit future uses of the property to those compatible with launch safety requirements for Titan IV launches at Vandenberg. We believe this can be accomplished by acquiring only restrictive easements, which is all that we need to meet safety requirements. We do not need to acquire a fee interest for that purpose. However, if the price of acquiring such restrictive easements should approach the cost of acquiring the fee, it would then be in the best interest of the government to acquire the entire fee interest. Even if that were necessary, the Air Force has no desire or interest in controlling or fencing any acquired property.

If the cost of restrictive easements should be so high to justify acquiring a fee interest, we would seek a suitable arrangement with a State or Federal agency which would sponsor use of the area for public recreation or other purposes compatible with our safety requirements.

At present, we plan to submit follow-on funding requests if we are unable to acquire the needed property interests with the $80 million requested in fiscal year 1992. Because of uncertainty regarding the actual value of the property interest involved, it is possible we may not require any additional funding. However, if additional funding requests are required, they would be included in our fiscal year 1993 and 1994 programs.

F-117A FIGHTER AIRCRAFT

The 56 F-117A fighter aircraft at Tonopah Test Research Site, Nevada, will be transferred to Holloman Air Force Base, New Mexico, beginning in late fiscal year 1992. This will reduce operations and support costs. Construction required for the beddown includes operations, maintenance, supply and support facilities. The total requirement for this beddown over a 2 year period is $97 million. Congress provided authorization for appropriation of $36 million for the first increment in fiscal year 1991. The fiscal year 1992 request is for the remaining $61 million.

CURRENT MISSION MILCON

The current mission segment of our Milcon program is focused on revitalizing our physical plant. It is essential to allow us to fulfill our obligations to care for our people, preserve the facilities and base structure of which we are custodians, and maintain required standards of environmental quality.

We appreciate the support we have received from the Congress over the years to provide the facilities needed to attract and retain a highly-trained and motivated military and civilian work force. Facilities which enhance the productivity of our people and provide a safe and clean working environment promote retention and generate significant cost savings in recruiting and training.

Our fiscal year 1992 current mission authorization request totals $423 million, down $122 million from last year. Our fiscal year 1993 request is only $34.4 million, however, and consists of $17.7 million for environmental projects and $16.7 million for infrastructure support. This is the lowest current mission Milcon request in many years and reflects, once again, the impact of the Milcon pause in fiscal year 1993. As custodians of valuable government assets, we recognize that this is not the level of funding necessary to sustain the quality of our bases.

The severely reduced request in fiscal year 1993 in no way diminishes our continuing commitment to revitalizing our facility structure, but instead should be viewed as a one-time pause driven by overriding budget considerations. As Assistant Secretary of Defense McMillan commented in his statement to the Appropriation Committee, due to the funding targets established at last fall's budget summit, we simply do not have the resources we would ordinarily apply to the problem. However, we hope to be able to restore a more appropriate level of program funding in our future budget requests.

At this juncture, I would like to address our continuing efforts to revitalize two important bases—Lackland Air Force Base, Texas—and Shemya Air Force Base, Alaska—and then conclude our discussion of our Milcon program with a few words on our program investments overseas.

LACKLAND AIR FORCE BASE, TEXAS

Our fiscal year 1992 authorization request includes funding for the 3rd year of our 5-year program to revitalize Lackland Air Force Base. The program focuses on solving infrastructure problems and replacing World War II buildings cluttering the base that is the "gateway to the Air Force" for our enlisted force.

The initial Lackland phase of $19.5 million was approved for fiscal year 1990. For fiscal year 1991, Congress authorized $22.5 million. Our fiscal year 1992 request of $6.45 million includes a consolidated headquarters/academic facility and renovation of a recruit dormitory. Because of the Milcon pause, our fiscal year 1993 request was deleted. Additional projects will be needed in future fiscal years to complete the revitalization of Lackland.

SHEMYA AIR FORCE BASE, ALASKA

Fiscal year 1992 completes our "fix Shemya" program. The Air Force is requesting $38.1 million in construction projects for fiscal year 1992 to complete the revitalization of Shemya Air Force Base, Alaska. This request is for a supply warehouse, air freight terminal, base roads upgrade, sea wall/erosion protection and a hazardous materials storage facility.

OVERSEAS MILCON

The Air Force continues to require Milcon for overseas facilities, both for new mission Milcon and facility revitalization under the current mission program.

In selecting Milcon projects in Europe, the Air Force carefully considered future impacts of force structure reductions and conventional forces in Europe (CFE) talks now underway with the Soviets.

Our request for Milcon projects in the European theater for fiscal year 1992 is $56.4 million, including $35.2 million for new mission and $21.2 million for current mission requirements. These projects include an intelligence facility in the United Kingdom, beddowns of rescue helicopters in Iceland and F-15E's at RAF Lakenheath, a control tower/radar approach control facility at Lajes Air Base, Azores, and a vehicle maintenance facility at Ramstein Air Base, Germany. Included under European projects for budget purposes are two runway projects at Thule Air Base, Greenland, one in fiscal year 1992, and the third and final phase in fiscal year 1993 for $9.2 million. This last project is the only Milcon project requested in the European category in fiscal year 1993.

Other overseas Milcon projects for fiscal year 1992 project are a child development center at Andersen Air Force Base, Guam, for $2.6 million, and a consolidated instrumentation control facility at Ascension Island for $11 million. The Ascension Island project is a continuation of a program to upgrade our launch/satellite tracking facilities and is similar to one at Mahe Air Base in the Seychelles which the Congress approved in fiscal year 1991. Finally we have asked for funds to complete the last two phases of the U.S.-Canadian FOLS/DOBS commitment: $20.7 million in fiscal year 1992, and $20.2 million in fiscal year 1993.

MILITARY FAMILY HOUSING

As in years past, Air Force leadership considers military family housing its number one discretionary facility program. We are convinced that no other facility effort influences the performance and commitment of our people as much as having a quality home for their families. We appreciate the Congress' support of our family housing program as we strive together to sustain the quality of homes for our people.

Even after considering the effects of reduced strengths, base closures, and overseas reductions, the need for family housing continues to be significant. The Air Force's fiscal year 1992 and 1993 requests represent a balance between managing, maintaining, and improving our existing homes within the constraints of an austere Air Force budget.

HOUSING IMPROVEMENTS

We continue to focus on the revitalization of our existing homes. Improving family housing is the top priority in the Air Force housing program. The Air Force will continue its highly successful "whole house/whole neighborhood" revitalization program. This program updates worn out bathrooms and kitchens, replaces obsolete utility and structural systems, provides additional living space to the limits of the law, brings our homes to contemporary standards, and performs all required maintenance and repair necessary to extend the life of the house for another 25 years.

Additionally, the whole neighborhood program will provide recreation areas, landscaping, playgrounds and other exterior amenities to provide attractive, functional living areas for our members. It is important to point out that the request for revitalization includes both improvement and repair dollars. As a result, the Air Force budget request for improvements is higher than that of the other services, but the request for repair dollars is lower. This results in comparable total per unit costs throughout DOD.

Unfortunately, when we compare our backlog to the historical level of funding appropriations, we find that it will take almost 22 years to complete our revitalization program. To improve this situation, we have explored private sector funding alternatives which would have the capability to accelerate the revitalization program to eliminate the backlog in a more reasonable manner, and we will continue to explore alternatives for resolution.

We appreciate this committee's past support of our housing program. While our fiscal year 1992 improvements request for $141.2 million is about 10 percent less in real spending power than our fiscal year 1991 authorization, it should be noted that all overseas projects have been deferred. The fiscal year 1993 request for $168.5 million brings us back to the fiscal year 1991 funding levels while still deferring overseas projects. The combined requests for fiscal years 1992 and 1993 will revitalize about 5,000 homes and provide improvements affecting another 1,200 homes.

NEW CONSTRUCTION

Our fiscal year 1992 request will replace 130 substandard homes at Hill Air Force Base, Utah, which lie within the noise and safety limits of the airfield runway, and also replace of 114 worn out Wherry units at Castle Air Force Base, California. Although the Air Force subsequently recommended the closure of Castle AFB, this replacement project is an example of the Air Force policy of carefully evaluating a proposed action prior to embarking on a solution. A housing survey confirmed the requirement for the housing and an economic analysis confirmed the unsuitability of revitalizing the units—thus leading to the request to demolish the existing units after replacements are completed. Additionally, our request continues our program to replace a number of substandard, unattractive and non-functional family housing management offices and maintenance facilities. It is vital that these facilities provide a workplace where Air Force families can be adequately and comfortably assisted in their housing search by our family housing professionals.

OPERATIONS, UTILITIES, AND MAINTENANCE

The fiscal year 1992 request for operations, utilities, and maintenance funding is $768.5 million. This program provides the needed funds to operate, maintain, and repair the nearly 140,000 homes in the Air Force inventory—with a replacement value of well over $11 billion. Approximately 80 percent of our O&M program is "must-pay" items such as salaries, refuse collection and utilities. The remaining 20 percent is applied toward our $884 million backlog of repair requirements. While our whole house revitalization program will reduce a small part of this backlog, a vigorous maintenance and repair program is necessary to preserve these units until they can be revitalized.

LEASING

The fiscal year 1992 leasing request is $140.9 million for both domestic and overseas units. The Section 801 build-lease program has been a very successful method of acquiring additional housing units for our families. Changes in the budget scoring rules, beginning in fiscal year 1992, effectively eliminates this program. We plan to award four projects (1,544 units) before September 30, 1991 and our requests reflect the lease payments for these units beginning in fiscal year 1992. One of these projects in the National Capital Region is a 1,242 unit joint venture with the Navy, and will result in a total of 828 units for the Air Force. The costs will be shared proportionately between the services. The Air Force will be the lead for housing management and maintenance and the Navy will be the lead for construction. This project will help alleviate the large deficit in the National Capital Region.

We are processing approval documents for a family housing revitalization project at Homestead Air Force Base in fiscal year 1991 in the Section 802 rental guarantee program, and have included four follow on projects in fiscal year 1992. We are scaling down our foreign lease program. However, lease costs have increased because of the declining value of the U.S. dollar and buyout or termination costs.

Our greatest facility need remains family housing, and our fiscal year 1992 and 1993 family housing requests reflect our commitment to sustain quality homes for our people. There are still too many Air Force families living in inadequate housing. We request full authorization of our Military Family Housing program request.

DEFENSE BUSINESS OPERATIONS FUND (DBOF)

The defense business operations fund is a new program starting in fiscal year 1992. It captures Milcon projects directly supporting business areas such as airlift, depot maintenance and depot supply, and funds them out of a central business account. Our fiscal year 1992 DBOF program request is $25.6 million for facilities at Kelly Air Force Base, Texas, Hill Air Force Base, Utah, Robins Air Force Base, Georgia, Tinker Air Force Base, Oklahoma, and Travis Air Force Base, California. The DBOF request in for fiscal year 1993 is $13.2 million.

REAL PROPERTY MAINTENANCE

Beginning in fiscal year 1993, the President's budget proposes transferring a portion of the real property maintenance account from operation and maintenance and RDT&E accounts to the Milcon account. The amount transferred in fiscal year 1993 is $493 million. This transfer is for projects costing more than $15 thousand done by in-house work forces and by contractors.

CONCLUSION

Mr. Chairman, our fiscal year 1992 and 1993 requests support facility projects for the most powerful aerospace force in the world. I appreciate the support of your subcommittee and Congress as, together, we protect and enhance the interests of the United States throughout the world.

I am honored to be able to appear before your committee today and to represent the U.S. Air Force. I will be pleased to answer any questions you may have.

Senator DIXON. Thank you, Mr. Boatright. First I will recognize the distinguished Senator from Indiana.

Senator COATS. Mr. Chairman, I thank you for this opportunity. Let me just confine my questions to one particular concern that I have, and I think Mr. McMillan and Ms. Livingstone, probably these questions are best addressed to you.

In January of 1991 the finance and accounting services of the various branches were consolidated into a single Defense Finance and Accounting Service, the DFAS, which was mentioned earlier. That consolidation I think made some sense from the standpoint of implementing a single management system, and my understanding is that that work is under way. The question that I have, after that was done in the release that was issued relative to that reorganization, it was indicated that the combined organization would have a small staff headquarters in Washington and that field centers would continue in operation. I think there are six of them.

Essentially the Army functions were performed at Fort Benjamin Harrison in Indianapolis and connected with that was an authorization for modernization of the finance building at Fort Harrison. I am wondering if you could bring me up-to-date on what the status is in terms of the Department of Defense and Department of Army's recommendations as to that construction?

Mr. MCMILLAN. Senator, in the President's budget, there is a request for $125 million to update that facility, and I think that request was made in connection with our finance and accounting consolidation. It is the Department's intent to use that building, and we support that authorization. Although it was not supported in the House, we do support that project. We think it made sense. We need that authorization in order to carry out the business of that new agency.

Senator COATS. Ms. Livingstone, do you have a comment?

Ms. LIVINGSTONE. Senator Coats, I can only echo what Mr. McMillan said. Building No. 1 at Fort Benjamin Harrison is in a horrific state of repair. It is extremely necessary that we move forward with the renovation and upgrade of that particular facility. In fiscal 1992, we did ask for an authorization approval for a $125 million rehab project for Building 1, of which $25 million is requested for appropriations in fiscal 1992. That request has not been supported thus far on the House side. We are working with them on the urgency of supporting our fiscal 1992 request for Building 1.

Prior to coming forward with that request, a cost benefit analysis was performed on that building, and it was determined to be more cost effective to renovate the existing Building 1 than to try to replace it through new construction. So again, we strongly support continuation of that project.

Senator COATS. If that authorization was not granted, how would it affect the functions of the new agency?

Mr. MCMILLAN. Senator, I think it would make it more difficult to carry out the consolidation because, as I am sure you are aware, that is a very large office complex, and as we go through the consolidation we are going to need that space. So I believe it would be detrimental to our plans to do the financial services consolidation.

Senator COATS. Ms. Livingstone, do you agree with that?

Ms. LIVINGSTONE. Senator Coats, I am sure you have been through Building 1 and seen the state of disrepair that it is in.

Senator COATS. I have. It is a big building.

Ms. LIVINGSTONE. I think it would be most unfortunate to require our employees to continue to work in a work habitat of that nature without providing the very necessary renovations. We also have a great deal of asbestos removal that needs to be accomplished in that building as well.

Senator COATS. Just so I understand it now, a study has been conducted, or at least conclusions have been reached that the cost of upgrading and modernization for that facility is more cost effective than duplicating that facility? I think it is the second largest Department of Defense office building in the entire inventory short of the Pentagon.

Ms. LIVINGSTONE. That is correct.

Senator COATS. So $125 million spread over a 5 year period of time, though it seems like a lot, given the number of square feet—I think I have that here——

Ms. LIVINGSTONE. There are 1.6 million gross square feet in the building.

Senator COATS. Okay.

Ms. LIVINGSTONE. Yes. The study has been completed. Essentially we conducted a cost benefit analysis of what it would take to build new versus renovation of the existing Building 1, and the overall construction estimate was $190 million for replacement of Building 1, versus the $125 million in renovation costs. While that appears somewhat close, excluded from the $190 million new construction estimate is land acquisition costs that may be needed, design, support facilities, and things of that nature. That is just the base construction cost for a replacement building.

Senator COATS. Very good. Thank you. Mr. Chairman, those are the only questions that I have. I got the answers that I was hoping to get.

Senator DIXON. Then I thank you. Next is the distinguished ranking member, the Senator from Mississippi, Senator Lott.

Senator LOTT. Thank you, Mr. Chairman. Thank you all for being here, thank you for your testimony. I wish we all had more money to help you all to do some very needed projects and some very needed jobs that would make the living conditions for our military people better. But I think you are trying to deal with it in a realistic fashion.

Miss Schafer, you talked about the Sections 801 and 802 housing. Let me make sure that I understand what you were saying. I get the impression that the 801 housing program has worked well, but I have been led to believe that there have been continuing problems with the 802 and that it has not worked well. Were you saying that during your testimony?

Miss SCHAFER. I was saying that we need to give Section 802 projects, the program, a chance to work well.

Senator LOTT. But I understand here that we have invested lots of time and effort, over 7 years, in trying to make that 802 program work.

Miss SCHAFER. Well, the effort is beginning to bear fruit. I am not sure when the authority first became available, Senator, but the first Section 802 project is ready to be awarded. It is at Marine Corps Air Station at Kaneohe Bay in Hawaii. Actually the Army is the housing manager on Oahu and they have been very helpful in bringing this about. We think it is going to be a good, sound project that meets our needs.

Senator LOTT. Tell me again a little bit about the specific project.

Miss SCHAFER. There is a project using Section 802 authority to be built at the Marine Corps Air Station in Kaneohe. It will provide 300 units for the marines who are stationed there. The Army is about to make an award based on proposals that were received earlier this year for that project. We are able to use Marine Corps property for the housing. When the houses are built, the developer will be offering to individuals the opportunity to rent the units and they will be using their housing allowance to pay the rent.

It is the first project that we have been able to initiate using the Section 802 authority, but we have a number of other Section 802 projects that are being planned and we hope to be able to put them out on the street later this year. We have four before the committee for approval.

Senator DIXON. May I interrupt you for a minute here, Senator Lott? As I understand it, and this is very important and I appreciate your developing this because 802 has been kind of a drag around here, but it looks like it has promise. Now, do I understand it that the government does not put up any of the money? They just guarantee, is it 97 percent occupancy?

Miss SCHAFER. Yes. They guarantee the occupancy, but the arrangements are made between the individual and the developer, not between the military and the developer except for the ability to use the space that is available on the installation.

Senator Lott. Why is it so difficult? According to the information I have, it has not worked very smoothly. It has been authorized since 1984, I believe, and now we are going to get our first project done. You know, I am really new to focusing on this. It looks to me like a concept that could work or should work, but it has not. I am wondering why not, and are we finally going to get some results?

Senator Dixon. Yes, that is a good question.

Ms. Livingstone. Perhaps Mr. Boatright and myself could give you an answer. When this program was first enacted in 1984, and it has been around for quite a long time as you have correctly noted, there were some constraints and flaws in some of the basic authority that was provided in the statutory act. Over the years, in concert with this committee and the House, we have been able to effect corrections in those, the most recent of which were made in the fiscal years 1990–1991 defense authorization bill. With those corrections, this program now is a much more attractive marketing package.

Some of the constraints, for instance, were there was an insufficient lease term that was provided originally when the program was first authorized. It is now a contract availability for up to 25 years. And as a result, based on the new statutory relief, we have been able to move forward with the project in Hawaii. It looks like a very economically sound package, and we hope to make our first award in May.

Based on that experience we would be requesting and have requested this committee to allow us to continue with this program and to authorize up to 2,000 additional units for Section 802. It works best in areas where the variable housing allowance is extremely high. Basically what we do is offer the attractiveness to a developer to come in, design and construct housing on government land, and guarantee, have a guarantee of 97 percent occupancy rate within the affordability range of the soldier and the family for a period of up to 25 years.

Senator Lott. I keep asking questions. It seems like such a good deal for a developer. I do not understand why it has not worked.

Ms. Livingstone. As I indicated earlier, there were some constraints in the way it was originally formulated in the statute. I understand those constraints have been addressed in the 1991 Defense Authorization Act, and that has made the capability to move forward with the Section 802 housing much greater than it has been previously. That has allowed us then to move forward with the project in Hawaii. Mr. Boatright may have an expansion on that.

Mr. Boatright. It did not work because there was not enough money in the rent to pay for the costs in the affordable rents that we could charge to the individuals who lived there. Under the earlier form of the legislation there just simply was not enough rent there. Now with the changes the costs have been reduced, and now we can match the rent with the costs and a developer can afford to come in and it becomes a fairly attractive project for a developer. That is the difference. That is what makes it successful today, but not before.

Senator Dixon. If you do not mind my kind of sharing the floor with you, Senator——

Senator LOTT. No, go right ahead.

Senator DIXON. I am really interested in this. I was so glad to hear my friend the distinguished Senator from Mississippi express his view earlier about housing. I think most of us on this subcommittee feel very strongly that as we downsize our forces, we ought to do everything we can to really make this a first class opportunity for career service people. Pay them good money, give them good pension opportunities, give them good housing, give them a first rate kind of professional status out there. That is what we want to do with this volunteer force.

So I think housing is very important. This has always looked like an opportunity where the government, which is always strapped with our budget crisis that we always have, and you all share that, to really get in there and through the private sector give us some housing opportunities.

Now, Mr. Boatright, what you have said is what I have heard before, too, that they cannot cut the mustard. The fellow comes in—I think in terms of, all of us think in terms of our home area, we have Scott Air Force Base in Illinois. As I understand Section 802, you give them the land and they come in and build the buildings, and then you guarantee them 97 percent occupancy for those who rent. But as I understand it, they have not been able to make it cost effective in the past. Is that not what the problem has been?

Mr. BOATRIGHT. Absolutely correct, yes, sir.

Senator DIXON. Now I am curious, Ms. Livingstone said something about Hawaii. I take it the allowances are greater, therefore they can pay more? Well, that is easy for me to figure out.

Ms. LIVINGSTONE. [Nods affirmatively.]

Senator DIXON. I thought you said something about how you have addressed the cost effectiveness of it somehow. How did you do that?

Mr. BOATRIGHT. I do not think we have. I think the revised legislation that we got last year—I do not have anybody here who can help me exactly with the specifics of the legislation, but I believe it brought down the costs or stretched the costs out over a longer period of time, I think, for the developer.

Senator DIXON. How do you mean that?

Mr. BOATRIGHT. A longer period of time on the lease agreement in allowing the developer to stretch out his costs over a longer period of time.

Senator DIXON. Oh, you mean you give a longer lease on the grant?

Mr. BOATRIGHT. Yes, sir.

Senator DIXON. So that is what you are saying.

Mr. BOATRIGHT. The rental stream then would pay for that cost stream of the developer, and it became a fairly attractive proposal.

Senator DIXON. In other words they can now lease for 25 years and take the full implications of the tax vote, et cetera? So if they get the money right and the interest rates are right, and borrowing, and they can build it right, they can then make a recovery of their costs and find something on the bottom line? Is that what you are saying?

Mr. BOATRIGHT. Yes, sir. I think in the Air Force another thing that we have looked at is initially we were looking at the lower grades where we have a fairly critical housing problem. We were gearing this program toward providing housing for the lower grades. Now, they have the least ability to pay. They get the lowest rates for payment for rent. Instead now we are looking at providing some housing for higher grade people with this program, making other housing available that we have, government-owned housing, for the lower grades. That provides a bigger funding stream and it makes a much better potential for development.

Senator LOTT. Well, I think you have answered my questions, and if I could I would like to go to a couple of other areas quickly, because I do not want to tie you up too much. I am not sure that this is the right panel I should be addressing this next item to. Maybe to Miss Schafer. I do not want to pick on you, but maybe you may have some jurisdiction in this area.

We had a construction moratorium. I presume that we are about done with that and through with it, and not going to do it anymore, and we are going to build these projects that have been authorized and the funds have been provided for, right?

Miss SCHAFER. Yes, sir. Many of them.

Senator LOTT. Thank you very much. Now to my next question.

Miss SCHAFER. A great deal of them, sir.

Senator LOTT. Can I tell Secretary Cheney that you have said that?

Miss SCHAFER. Just to give you an idea, Senator, in the Navy the total number of projects, the total value of projects that have been held up through this moratorium and extension of moratorium situation over the last year or so totaled about $2.1 billion. When the base closure recommendations were forwarded to the new Base Closure and Realignment Commission, Deputy Secretary of Defense Atwood changed the control procedures for future projects and authorized the service secretaries to guarantee or to assure that these projects were needed. As a result the Navy expects to be freeing up about $1.3 billion worth of projects that are subject to the Secretary of the Navy's approval.

However, other categories of projects, namely those that were on the list of recommended base closures and realignments, at any of those installations, those within the national capital region, those overseas and those concerning land acquisition will continue to be subject to the approval of the Deputy Secretary of Defense. For the Navy that is about 22 percent of the total projects that we have.

Also, we are continuing to review projects to be certain that the requirement still is there. Others are being deferred for further study. Still others were in fact granted waivers through this waiver process, and some projects are no longer required because of force structure reductions or because of the base closure and realignment recommendations. An example of that would be facilities at Bangor, Washington for the D-5 missile facilities to match the changes in the D-5 program.

Senator LOTT. I realize that these have been difficult times, and that maybe a pause was defensible. I think the Congress, while we have complained loudly, we have not taken action to stop or prohibit by law this kind of moratorium because we were looking at the base closure and the new force structure and all of that. But I really am very uncomfortable that these funds in fact have been impounded, have in effect been impounded. I hope that you all will move right on out with this, because otherwise I think the Congress is going to begin to look for a way to make you stop doing it as much as you have been. Do you want to get into this, Mr. Secretary?

Mr. McMILLAN. Senator, when the base closure list went to the Base Closure Commission we came up with a new set of rules. There is no moratorium. There is a level of approval and certain things have to be approved by the Deputy Secretary of Defense through my office. We are working to further refine that. The numbers are that about 95 percent of the Air Force projects are now being approved in the Office of the Secretary of the Air Force, about half in the Army.

Miss SCHAFER. Sixty-three percent.

Mr. McMILLAN. Sixty-three percent in the Navy and the Marine Corps. We are working to give additional authority to the service Secretaries. I would anticipate that we would have those details worked out within the next few days. The thing we do not want to do, Senator, is to allow projects to be approved and funded that are going to be impacted by a base closure. There may be some receiving facilities whose missions change. We want to be sure we do not build something in a place where we have an entirely new mission. We understand Congress' concern, and we are working very hard to get a decent administrative plan.

Senator LOTT. I have just one final question, Secretary McMillan. I guess there has been talk over the years about the Corps of Engineers and just exactly where they should be located. You do not, the Army does not exercise a whole lot of jurisdiction over the Corps of Engineers, as I understand it?

Mr. McMILLAN. Well, maybe Ms. Livingstone can answer that.

Senator LOTT. We were thinking about giving her more responsibilities in that area.

Ms. LIVINGSTONE. I am not sure that the Corps of Engineers would probably appreciate any more Army-Secretariat oversight than they already have. There are, beyond of course the Secretary of the Army himself and the Under Secretary of the Army, two assistant secretaries who divide responsibility for policy and program oversight over the Corps of Engineers. I am Assistant Secretary of the Army for Installations, Logistics and Environment, and as such, I am responsible for overseeing the military program side of the corps.

In addition, there is an entirely separate Assistant Secretary shop for civil works in the Army that oversees the other half, if you will, of the corps' responsibilities that deal with the civil works programs. So I think from the corps' perspective, and quite frankly from the Secretariat's perspective, there is a very sufficient delineation of oversight responsibilities for the Corps of Engineers.

Senator LOTT. I am just concerned about the Corps of Engineers and the drift that I have seen over the years. I would like to keep them more military and more under your jurisdiction, and less involved with EPA and Fish and Wildlife and things like that. The question has arisen whether the Army should continue that function. Are they going to be in the Army, or are they going to be somewhere else? I would like to get some clarification on that in the next couple of years.

Ms. LIVINGSTONE. Sir, General Offringa who is the Assistant Chief of Engineers, is here. He is probably chomping at the bit to have an opportunity to respond to your questions. Nonetheless, I would indicate that on the military programs side that is clearly of course within my jurisdictional oversight as Assistant Secretary for Installations, Logistics and Environment. On the civil works side, a vast portion of that work is work that the Army Corps of Engineers has traditionally performed, of course, for decades, in terms of the waterways development, rivers, harbors, dams, things of that nature.

Senator LOTT. But my concern is, just like this committee, we do not have any oversight hearings on the Corps of Engineers, do we? They are under the Environment and Public Works Committee.

Ms. LIVINGSTONE. Except for military programs.

Senator LOTT. I would like to get them more in here. I think we need to give them a different side of the story than what they are being given now.

Ms. LIVINGSTONE. Sir, you have one right behind me here from the Corps of Engineers. Perhaps General Offringa would like to address the division of the responsibilities within the Corps of Engineers. The amount of work the Corps of Engineers does, "work for others" is what we call it, actually is a fairly small percentage of their overall involvement in budgeting in terms of the support that they provide for non-Department of Defense elements. General Offringa, would you care to say something?

General OFFRINGA. Yes, sir.

Senator DIXON. General, would you be kind enough to identify yourself for the record?

General OFFRINGA. Yes, sir. I am Gen. Peter Offringa, Assistant Chief of Engineers. First of all, I have been the Assistant Chief for 3½ years and it has been my privilege to be here for at least six of your hearings. I feel that we get good guidance and direction from this committee and others with oversight on what we do on our military mission. The civil mission of the corps, as the Senator pointed out, is under the Public Works Committee.

Then there is another portion, as Ms. Livingstone pointed out, that is relatively small. It is called work for others, which is done on a fully reimbursable basis. That work is done for several reasons. One is to keep the proficiency level of engineering at a high level within the corps. Number two, it is a workload leveler because as you know, our workload rises and falls. And third, it provides us a professional base that keeps our skills honed that we are then able to apply to either the military or the civil mission. Work for others is under the direct control of the Assistant Secretary of the Army for Civil Works, and anything that we do in that area is approved by him before we are allowed to do it.

I believe work for others is a very important part of maintaining our professional base; and the oversight that we get from the Assistant Secretary and our oversight committees, is sufficient to keep us going on the straight and narrow.

Senator LOTT. Thank you.

Senator DIXON. I thank the distinguished Senator from Mississippi.

I have a number of things on my mind but I would like to return to the 801, 802 sections that my friend from Mississippi has introduced into the discussion. And he is quite correct, in the past it has been our experience that we continue to see no progress.

Now, Miss Schafer, did I hear you to say that you have four different efforts this year under 802, or did I misinterpret that?

Miss SCHAFER. Yes, that is correct. We have projects now that we would like to get moving this year. We have plans for more if the authority is extended.

Senator DIXON. Under 802?

Miss SCHAFER. Yes, under Section 802.

Senator DIXON. Would you repeat what those are? I thought I heard Great Lakes among them.

Miss SCHAFER. Yes, that is right. We have deficits. We think that Section 802 projects are going to work best, as Ms. Livingstone explained, in areas that are expensive areas to find housing in. So we focused, from a market point of view, on four areas: the Washington metropolitan area, Oahu, Hawaii, southern California associated with Camp Pendleton, and in the Great Lakes area.

Senator DIXON. May I interrupt at that point? You see then, I did not hear you correctly at first. In other words, you are saying you want to try 802 where housing costs are high. I misinterpreted that. I thought you meant someplace where there is some extra pay, overseas or something like that. No, that is not what you said.

Miss SCHAFER. Because we have a variable housing allowance that varies based on how expensive it is to find housing in a particular area, that comes into play as well. And the service member can afford to apply his or her housing allowance to the projects that we are building in these areas.

Senator DIXON. Have you looked at these four places, made a survey or a study, and come back with a report that convinces you it will work at those four places? Is that what you have done?

Miss SCHAFER. Yes. And in other places we believe it can be tried and we would like to test the market in those areas as well.

Senator DIXON. I really would appreciate it if you folks would share with my staff, the kind of expertise that was in play in coming to these conclusions. I would like to have, if you will be so kind, a shared experience with you about how this goes forward and what your experience is. Because I really see this as an opportunity for housing in the future because everything will be tighter, and tighter, and tighter from the standpoint of how much money we can authorize and the Appropriations Committee can appropriate.

It appeals to me that to the extent that we can employ the private sector, and somebody out there can make a respectable profit at the same time, offer good housing to our service people, I think that is tremendously important. I would certainly like to go along through this with you on a kind of shared experience.

Miss SCHAFER. The Secretary of the Navy certainly agrees with that. The Secretary, last fall, created a Navy steering group, which includes the Marine Corps as well, to try to develop these kinds of projects. And we have targeted 15 or 16 sites for Section 802 projects that we would like to continue to develop based on the experience that we have gained with the Section 802 that the Army is helping us with at Kaneohe Bay in Hawaii.

Senator Dixon. Staff has been telling me about the scoring problem, which is apparent in what I have looked at here. I would like very much to have that kind of a discussion going on too, and maybe a shared discussion with OMB and others. I would like to be able to get a handle on this from the standpoint of the scoring problems and everything else, with all the agencies that are involved, that are at play in this, so we can really get something that works.

Mr. McMillan. Senator, my office, and particularly Dave Berteau, is involved in discussions with both the Department Comptroller and OMB on scoring. There are some unresolved issues. It is possible that the scoring will be such that it will not be attractive to do either one of these programs. We are optimistic that we will get some of these programs funded with the scoring problem, which make you score up front the total cost of the rent for the period of the lease, which is a difficult way to score in terms of wanting to build the project.

Senator Dixon. May I interrupt you there, Mr. McMillan? Here is what I really wish you would do. Frankly, you cannot get this all clarified at a hearing like this right now. You understand that?

Mr. McMillan. Yes, sir.

Senator Dixon. What I really would appreciate you doing is, I would ask my staff to work closely with you on this. I would like to have them talk to you folks, CBO, and everybody else involved on the scoring questions, and find out what is the matter and how we can score this so we can do it.

You know, there are all kinds of things that go on around here that all of us appreciate as necessary. But at the same time, what I would like to find out is why we cannot do something here that will get the private sector involved where they can make a legitimate profit. Nobody is in this as a eleemosynary institution, and at the same time, the government would be worrying about appropriating the money when we are on a downhill phase right now, and give these folks out there decent housing.

Now, it sounds to me like this is a thing we ought to be able to do. I understand all about the problems. But a lot of these problems are solvable if people want to solve them. All I am saying is, I would like to have a good solid look at this and see whether we could get it so that it works.

I can think of a lot of bases around the country that need housing. There are people around there who cannot find anything to build right now because things are tough, but I think would sure like to build. I cannot see why we cannot figure this out so people can build and make a profit. We would get housing on the bases and the folks in the service could get a nice place to live.

Mr. McMillan. Senator, if we do not get the Sections 801 and 802 extension, then the program is dead. That is the main point.

Senator Dixon. I understand that point. And you understand you have here at your service, a colleague of mine, who I think, feels the same way; people want to help you. But I want it to make sense.

Here is what I am suggesting, talk with my staff and talk to the other people involved, maybe you can come back to us and we can figure out a way to write it so it will work. We are just simple folks at this end of the table, but if you all talk maybe we can find a way to do this and maybe we will have another hearing on that question only, on Sections 801 and 802, particularly Section 802, before we do markup and mark this up in a way it will work. Do you follow what I am saying to you?

Mr. McMILLAN. Yes, sir.

Senator DIXON. That is what I would like to do. Does my colleague have any problem with that?

Senator LOTT. Not a bit.

Senator DIXON. Let us see if we can do that. We will put our staff with you and get together with the other folks with the green caps and see if we can figure it out.

Mr. McMILLAN. Yes, sir.

Mr. BOATRIGHT. May I add one thing? There is another little twist to the Section 802 program which the Air Force has been interested in pursuing, and that is to lease to a developer, housing that we already have somewhere on the parameter or base so you can have access from the outside without going through the base gate. And having a developer improve that housing, bring it up to current standards.

Senator DIXON. Sure.

Mr. BOATRIGHT. Under the Section 802 program, and then rent that housing to individuals we refer to the developer. We think that is an excellent approach. It brings down the overall cost. It puts it in the range of the lower grades for the Air Force from a rental standpoint. We believe, the Air Force believes, and our counsel has reviewed it, that this is allowed under the revised Section 802 law.

Senator DIXON. Well let me say this to you, Mr. Boatright, I like it. And if it is not allowed now, there is no reason the distinguished Senator from Mississippi and this Senator, cannot change the language, and mark it up, and give it back to our colleagues on the committee to get it done this year. Now, we have been fiddling with this since, when did you say it started?

Senator LOTT. 1984.

Senator DIXON. 1984. We keep fiddling with it. Why can we not fix it?

Mr. BOATRIGHT. I think we can.

Senator DIXON. Why do we not do it before the markup is finished this year, have it solid in the DOD authorization bill and send it to the President and then provide some housing out there for folks.

Ms. LIVINGSTONE. Sir, all of us would welcome that opportunity.

Senator DIXON. Well, then I suggest that my staff will work with you, that will be my instruction to them. And my distinguished colleague, if he will ask the minority staff to join us, we will get with you folks and see if we can figure this out. If it takes changes in language, we have counsel from the committee and others to help. Let us see if we can get this in shape for this year. Okay?

Senator LOTT. And this might be our last chance too, so let us get it right. [Laughter.]

Senator DIXON. Okay. I think if we do that it would be a very solid accomplishment in my view.

Now, there are one or two more items. I am not trying to pick on you, Mr. McMillan, but you have got my old friend back, "Mr. Crotone." Everybody is standing around all covered with blood from all of the base closings and I keep coming back to Crotone.

Senator LOTT. He said I could ask the questions about Crotone and I said, I wanted to yield to the Chairman on that one.

Senator DIXON. I take it you do want to continue to pursue the question of the money for Crotone?

Mr. MCMILLAN. For Crotone? Yes, sir, we do.

Senator DIXON. The House has zeroed it again, as you know.

Mr. MCMILLAN. Both NATO and the U.S. Commander in Europe think that Crotone makes sense strategically. We would like to continue funding there. NATO has come up with its part of the money for the initial funding and I think it has authorized and expended the funds for the runway, and that is it. Further funding was not authorized, but we would like to have that authority.

Senator DIXON. Well, I admire you for your tenacity

Senator LOTT. Would you yield on that?

Senator DIXON. I would yield to the Senator.

Senator LOTT. What kind of money are you talking about now? I understand there has been a substantial reconsideration and downsizing, and a much lower amount of money from our side. In fact, I do not know where I got this number, but maybe $171 million or something like that. What are they asking for?

Mr. MCMILLAN. If you will wait just a second, Senator, I will get that number.

Senator DIXON. I thought it was $300 million.

Senator LOTT. I would be interested in what you were asking for and what our allies are putting up, the Germans for instance.

Mr. MCMILLAN. I do know that we have reduced the scope of the project. We are working with the Italian Government now on other ways to fund the housing. I think Jim Boatright could answer that further for you, Senator.

Mr. BOATRIGHT. The total NATO cost today, April 1991, is $494.8 million. The U.S. share is 27.8 percent, which is $137.7 million of that, that cost to construct the facility. Plus, there are some other additional U.S. costs associated with this. And so the total U.S. costs is $188 million that applies to the cap that was provided in previous law and in report language.

Senator LOTT. Let me ask you about that. That $50 million plus or whatever figure you just referred to, I understand those are costs we would have regardless, anyway. Is that right or not?

Mr. BOATRIGHT. There are relocation costs, support costs, costs other than construction facility things. But they are related to bringing Crotone to an operational state. So if you did not build it, you would not have those costs.

Senator LOTT. So $188 million is the figure now?

Mr. BOATRIGHT. One hundred eighty eight million dollars, and that is applicable to the cap that was placed on it. There was a cap placed on it earlier that said that you could not spend anymore than this for these sorts of things and all of these sorts of things stood within that cap.

There are two other things that fall outside of that cap which gives us a total U.S. cost of $236.5 million. I do not want to mislead anybody. That is the total cost as we have it. April 1991 was the date of that estimate.

Senator DIXON. I thank you very much.

We will go through this all again, I guess. How did we leave it last year? We fought about it so long, I do not remember how we ended up. [Laughter.]

How did we end up last year?

Mr. BOATRIGHT. I think last year we ended up with a prohibition against spending any U.S. appropriation for Crotone.

Senator DIXON. Oh, I remember now. We ended up requiring a NATO certification that they needed and they certified again they need it.

Okay. Well, thank you very much. We will sure look at it again. May I ask you something of a relatively parochial nature here, Ms. Livingstone?

Ms. LIVINGSTONE. Yes, sir.

Senator DIXON. In a hearing that I held here in the subcommittee on April 17 I asked General Tuttle to provide the committee with the information used to determine what kind of savings there would be in moving approximately 1,400 personnel from the Rock Island arsenal in my State to the Red Stone arsenal in Huntsville, Alabama.

I made this request because I could not understand why the Army would prefer spending the money to build new facilities at Red Stone instead of utilizing over 400,000 square feet of unused office space currently available at Rock Island. In other words, I do not see where there is a cost effective characteristic to that kind of transfer.

In response to my request, General Tuttle sent me a paper which I hold here in my hand. This paper was supposed to show how the Army came to the conclusion that this plan would result in a saving to the taxpayers. However, this paper, I have to tell you, indicates that major construction expenditures are necessary at Red Stone. If I read it right, it shows that these expenditures steadily increased from over $2 million in year 1 of the plan to over $16 million in year 4, and so forth.

I guess I have to persist in saying to you that I am not getting documents that show a cost-effective nature to this move.

Ms. LIVINGSTONE. Sir, I have not seen the paper that General Tuttle sent to you. The construction figures sound extremely high and I am wondering if this overall figure that was provided to you includes the entire recommendations of his major command future vision, which was called AMC Vision 2000.

In point of fact, the senior Army leadership did not approve all of that package and I believe the construction costs associated with those portions that were approved at Red Stone is something on the order of $40 million, but let me verify that right now.

Senator DIXON. Ms. Livingstone, rather than verifying all of it right now, I think it would probably be difficult to do that for the record. My understanding was that this was intended to be a statement regarding the realignment question pertaining to the transfer from Rock Island Arsenal only.

Would you be kind enough—I am a trial lawyer by trade in my other life, and not a CPA. The things you are sending me, if I am interpreting them correctly, show a cost here, not a savings to the taxpayers. Now, I do not say you cannot justify it if you want to justify it on other grounds. But my interpretation of the intention of the Base Closure Commission Act, which I am the author of, is that there should be a cost effective to what we do. I am only asking that you make me a case on that.

Ms. Livingstone. Yes, sir. I would be delighted to do that.

Senator Dixon. Would you do it in such a way that this poor Senator could interpret it in a way that I can understand it? I have to tell you that my interpretation of this is, it is a cost.

Ms. Livingstone. Sir, in point of fact, there are savings that are generated over the implementation period for the package and then steady-state savings of on the order of, I believe $66 million are generated then about in fiscal 1998 for that package. We will provide those to you and believe me, they will be in a form, if I can understand them, hopefully you will too. But it will not be in that type of spreadsheet form.

[The information follows:]

The annual steady-state savings expected for the move from Rock Island to Redstone is $39 million beginning in fiscal year 1998. This savings is primarily derived by the elimination of 972 civilian personnel in addition to the transfer of approximately 1,400 positions that would be moved to Redstone Arsenal. The upfront costs for this move involves construction of 250 thousand square feet of administrative space at Redstone Arsenal for $38 million, moving expenses totalling $28 million and an additional $11 million of other costs. The ability to eliminate 972 civilian employees is contingent on the efficiencies achieved by merging the two Inventory Control Point (ICP) activities at one location, an operational decision that is facilitated by the elimination of one major subordinate command of the Army Materiel Command when Depot Systems Command and the Armament, Munitions and Chemical Command are merged to form the Industrial Operations Command.

Senator Dixon. I do appreciate that.

Ms. Livingstone, according to your testimony the Army's family housing backlog of deferred maintenance and repair will increase in constant dollars by about 25 percent from fiscal year 1990 to 1993. What additional funds would you say would be required to simply maintain the current level of deferred maintenance?

Ms. Livingstone. Deferred maintenance, obviously, on the housing side has been growing, unfortunately, over a period of time. I would have to turn to General Offringa and ask if he has an estimate for a steady state. We do not have a formula that requires perfection in the maintenance of any of our facilities. Our goal is to replace about 2.86 percent of the plant replacement value per year for Army family housing. We are about at 1 percent, which places us anywhere from a 70- to 100-year replacement cycle in Army family housing.

To get us back more toward our goal would probably require $100 million to $200 million additional per year in that Army family housing account.

Senator Dixon. Thank you. Mr. McMillan, you pointed out in your testimony that beginning in 1993 repair and minor construction projects should be funded within the military construction rather than the operations and maintenance account. I believe you would transfer $1.8 billion for this purpose in fiscal 1993. I simply ask you, if it is good in fiscal 1993, why have you not proposed to do it in 1992?

Mr. McMillan. Senator, I think there are some technical things that need to be worked out in the administrative area. We would prefer to wait until 1993.

Senator Dixon. In other words, you do not think that it would be feasible to do it in 1992?

Mr. McMillan. No, sir, we do not.

Senator Dixon. Miss Schafer, you point out in your testimony that the details of realigning minor construction repair funding from the operations and maintenance account to the family housing account have yet to be worked out within the Department. I ask you, in your view, what are the major issues which need resolution? Will these services enjoy the same degree of flexibility and autonomy under this new proposal so that unforeseen construction and repair requirements can be remedied quickly, with minimal amounts of paperwork?

Miss Schafer. I think you have reached most of the issues in your question, Senator. We certainly would like to be able to retain some flexibility. And as Mr. Boatright pointed out, we now have a decentralized program, and to centralize it would certainly require what we think would be additional and unnecessary resources for management purposes. But we also would like to try to make this a workable proposal. We certainly support it. And so long as it retains some flexibility, we think we can make it work.

Senator Dixon. Thank you, Miss Schafer.

Now, I have a lot of questions to ask. If it is satisfactory with the four of you, I would like to send them to you in writing and ask you to respond in writing for the record.

Let me simply say this in conclusion, I think it was the last session that we had the famous problem with the Pentagon, yes, it was the Pentagon and the General Services Administration. As you listen to all the testimony, you manage to get more and more confused, so the solution that I came to at that time was to get my staff to work with everybody. And believe it or not, we found a solution that I think everybody has found adequate, given all the problems.

You know, we hold these hearings and everybody testifies, we ask some questions and you give us some answers. That is fine. Everybody goes home and thinks their job is done. But sometimes we do not solve the problem by that. Do you understand what I am saying to you? I really mean this sincerely.

As I go around the country to these bases and I see what is changing now, as we go back to this down-sized force, it is a professional career. People who enter the military are all volunteers. I say again that we ought to pay them well. We ought to give them the inducements to make this a career. We ought to treat them like the high-class citizens that they are, when they are choosing this profession as their life calling.

And we ought to give them good housing, we are not doing enough on the good housing part. You know, I see some of this housing and I think, doggone, it is not as good as our country ought to be doing, and we ought to do better. And I see in this subcommittee how the money is not there to do it. And if there is an opportunity out there in the private sector—and I put it to you that there really is—all kinds of people would like to be building right now. And they would be building in a pretty marginal profit just to keep busy.

So I sure would like to find a solution here. I would appreciate it very much if your branches of the service and all of you would work with my subcommittee staff to see if we can get something solid that everybody agrees does the job, and that we would see some housing going in all over the country. All of these bases need first-class housing.

Mr. Boatright, you were talking about repairs, you know, there is some pretty nice stuff out there that you could repair, it looks pretty bad now. But I will tell you what, if you fix it up and put a good coat of paint or two on it, put in some new bathroom facilities and some new kitchens—which my experience has always been are the two things that brighten up a place—you could make these places into pretty decent homes for young families and would attract people into the service as a career.

I think it is a tremendous thing we could do if we could accomplish that, and I would like to urge you to work with my staff. I would like to make that one of my goals this year in this Department of Defense authorization bill. And if we could do that, I think we would all perform a service that would be important, particularly for enlisted personnel in this country.

Mr. Boatright. We would certainly be pleased to work with you, sir.

Senator Dixon. I am delighted to hear you say that, and I thank you all for your valuable contribution.

[Questions for the record with answers supplied follow:]

Questions Submitted by Senator Alan J. Dixon

OVERALL FUNDING LEVEL

Senator Dixon. Mr. McMillan, what were the unique circumstances which justify the virtual elimination of capital investment in fiscal year 1993? Given the projected defense topline numbers for fiscal year 1994 and fiscal year 1995, which show a continued decrease in the Department's purchasing power, how do you foresee these trends being reversed in these budget years?

Mr. McMillan. The budget summit agreement established caps on both budget authority and outlays for the budget year and each of the subsequent outyears covered by the Future Years Defense Program. The difficulty in meeting these constraints was further compounded by the fact that most of the outlays occurring in fiscal year 1993 result from the liquidation of obligations made in prior years. This situation severely curtailed the Department's options. In order to honor the summit agreement totals for fiscal year 1993, the only viable option was to pause the construction programs for 1 year. However, the Military Construction program for fiscal year 1994 onward has been restored to more robust levels.

Senator Dixon. In your personal view, do you believe that the fiscal year 1993 construction request is adequate to meet the services' facility needs?

Mr. McMillan. Given the Department's lower overall level of resources, a lower funding level for facility investment was determined to be one of the least disruptive alternatives available. Excellent facilities remain very important to the Department. Unfortunately, budget limitations and competing priorities force us to continue to restrain investment in facilities.

LEASE REPLACEMENT FUND

Senator Dixon. Mr. McMillan, section 504 of the Department's legislative proposal addresses the use of operations and maintenance funds to construct facilities which would permit the termination of off base leases.

a. What is the purpose of this initiative?

b. If these capital investments make functional and economic sense, why don't you simply request military construction authorization for this work?

Mr. McMillan. a. DOD spends about $400 million annually leasing approximately 44.5 million square feet of general purpose space at 8,294 locations in the United States. With occupancy costs for DOD space continually rising, it is imperative that remedial action be initiated to move DOD activities from leased space to on-base facilities when it is cost effective to do so. To enable the movement of DOD activities from leased space to on-base facilities during a time of severe budget constraints, we are proposing that a revolving fund, the Lease Replacement Fund be established to finance the necessary renovation or construction of on-base military department and Defense Agency buildings. We are requesting this $50 million in appropriated funds for planning, design, and construction costs, and to serve as the corpus for this revolving fund. After on-base facilities are renovated or constructed, the fund would begin to be replenished through annual recoupment of a depreciation type fee on the renovated or constructed buildings which would be charged to a service or Defense Agency operation and maintenance account. In developing this proposal, we conducted internal DOD audits and studies, the principal finding of which was that DOD activities leased space even though land and buildings were available on nearby military installations. This finding was based on the review of 30 DOD installations of which 22 had available space and land (approximately 1.6 million square feet of general purpose space and 1,288 acres of land). Some of the available space did not need renovation and could be occupied immediately. We estimate that the military departments will be able to significantly reduce Operation and Maintenance costs by moving activities into low cost DOD owned facilities. During fiscal year 1992 candidate activities to be moved from leased space onto nearby military installations will be identified. In accordance with public law, these candidate projects will be submitted to Congress for authorization and approval of funds expenditures from this fund. This fund will augment our regular Military Construction Program.

b. The $50 million proposed to serve as the corpus for this fund is requested from the military construction authorization. When projects are identified the Department will seek project authorizations against the funds appropriated into this corpus. The significant difference with this proposal is its self-sustaining nature. Once projects are funded from this account and the buildings renovated or constructed, the command or tenant that moves into the facility will begin paying the equivalent of the amortized cost of the project in annual rental fees for the space occupied. This will rebuild the fund and allow for additional future projects. The Department will request project authorizations for the initial projects and future projects from the fund in the same manner as the GSA Building Fund has operated in the past with DOD tenants.

O&M ISSUES

Senator Dixon. Mr. McMillan, in last years National Defense Authorization Act, we provided authority for the Department to capture the proceeds from property sales and leases to fund real property maintenance and environmental restoration. Has the Department established procedures to implement these authorities? Can you estimate the amount which will be recouped from these two authorities during fiscal year 1991?

Mr. McMillan. The Department has established both the review/negotiation procedures and the accounting procedures to implement this authority. With regard to the amount, the Department expects to recoup approximately $5.2 million in fiscal year 1991; however, the total estimated amount is not determined at this time.

USE OF RESOLUTION TRUST CORPORATION ASSETS

Senator Dixon. Mr. McMillan, what procedures has the Department implemented to review the assets of the Resolution Trust Corporation prior to proposing additional off base leases, the construction of off base family housing, or the capitalization of other facilities which might be accomplished through existing RTC assets?

Mr. McMillan. The military departments have included, in their military construction requests for fiscal years 1992 and 1993, certification that RTC assets were reviewed for possible use. Potential uses included military construction projects, various types of leased space and land acquisition. In general, the types of facilities in the RTC inventory are not suitable for military use. The vast majority of military construction occurs on military installations or adjacent thereto and consists primarily of operational, housing and some administrative facilities. The military departments have been directed to continue looking into the possibility of using RTC properties, whenever possible, and will include certification to that effect in future proposals to Congress.

CONSTRUCTION AND OTHER MORATORIA

Senator DIXON. Now that the Secretary's closure and realignment list has been released, can you advise the number and value of projects which have yet to be released either by the Office of the Secretary of Defense or by the service Secretary.

For the record, please provide a list of all such projects and the reasons why they have not been released for execution.

Mr. MCMILLAN. As of April 16, 1991, there were approximately 1,285 projects at a value of about $5.2 billion yet to be approved for construction contract award by the Deputy Secretary of Defense or the appropriate service Secretary.

A listing of these projects is attached.

As of May 31, 1991, approximately 350 projects at a value of $1.2 billion have been approved to award construction contracts. Rationale of why the rest of the projects have not been approved are as follows:

1. Approval to award the construction contract has not yet been requested.
2. Some projects are affected by base closure or realignment and are being further reviewed.
3. Some projects are affected by force re-structure actions and are being further reviewed.
4. Some projects are affected by defense management review actions and are being further reviewed.
5. For many projects, the services are waiting until the project is ready to execute the construction contract before requesting approval.

Army

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
Anniston AD	AL	Ammunition Demilitarization Support Fac	91	MCA	10,200	211
Anniston AD	AL	Inertial Guidance Unit Maintenance Fac	91	BRAC	1,350	32320
Anniston AD	AL	Ammunition Demilitarization Site Prep	91	MCA	4,900	35170
Ft McClelln	AL	Applied Instruction Facility	90	MCA	2,750	10171
FT RUCKER	AL	FAMILY HOUSING NEW CONSTRUCTION	90	AFH	300	17797
Ft Rucker	AL	Land Purchase	89	MCA	410	15934
Ft Rucker	AL	Automated Record Fire Range	90	MCA	1,150	5733
Ft Rucker	AL	Flight Simulator Building	91	MCA	3,400	9992
Redstne Ars	AL	Physical Sciences Research Center	91	MCA	14,400	2687
Redstne Ars	AL	Scientific Library	90	MCA	890	2512
Redstne Ars	AL	Laboratory Facility Addition	90	MCA	17,500	2726
FT CHAFFEE	AR	REGIONAL TNG CTR-MED	90	MCAR	2,097	1538
FT CHAFFEE	AR	REGIONAL TRNG SITE-MAINT	91	MCAR	2,651	1548
Ft Huachuca	AZ	Maintenance Facility	90	BRAC	4,750	31440
Ft Huachuca	AZ	Enlisted Barracks	90	BRAC	40,000	31439
Ft Huachuca	AZ	Utilities/Roads Upgrade	90	BRAC	13,700	31460
Ft Huachuca	AZ	Fire Station	91	MCA	1,050	1330
Ft Huachuca	AZ	Test and Evaluation Center	89	MCA	5,400	26366
Ft Huachuca	AZ	Enlisted Personnel Dining Facility	90	BRAC	6,100	31443
Ft Huachuca	AZ	Applied Instruction Building	90	BRAC	18,800	31491
Ft Huachuca	AZ	Applied Instruction Building	90	BRAC	11,500	31598
Ft Huachuca	AZ	Building Rehabilitation	91	BRAC	4,600	31580
Ft Huachuca	AZ	Barracks	90	MCA	9,900	26489
Ft Huachuca	AZ	SCIF Building	90	BRAC	500	33288
Ft Huachuca	AZ	FAMILY HOUSING IMPROVEMENTS	91	AFH	1,150	17661
NAVAJO ARMY DEP	AZ	TRNG SITE,	91	MCNG	6,522	040011
Ft Ord	CA	Automated Record Fire Range	90	MCA	2,450	6521
Ft Ord	CA	Family Housing Improvements	91	AFH	2,700	
Ft Ord	CA	Regional Water System-Phase I	91	MCA	7,400	27343
Sacramto AD	CA	Microwave/Radar Maintenance Facility	90	MCA	3,900	180
Ft Carson	CO	Aviation Unit Maintenance Hangar	91	MCA	11,400	3663
Ft Carson	CO	Tactical Equipment Shop	91	MCA	6,500	16829
Ft Carson	CO	Warehouse	91	BRAC	9,000	32738
Ft Carson	CO	Tank Gunnery Range Upgrade	91	MCA	5,600	9020
Ft Carson	CO	Automated Record Fire Range	90	MCA	2,250	3930
Ft Carson	CO	Army Headquarters Building	91	BRAC	16,500	32186
Pueblo AD	CO	Family Housing Improvements	91	AFH	24	24198
Pueblo DA	CO	Chemical Area Security Upgrade	89	MCA	3,200	9804
Ft McNair	DC	Family Housing Improvements	90	AFH	15	
Ft McNair	DC	Family Housing Improvements	88	AFH	220	
Walter Reed AMC	DC	Parking Structure	90	MCA	11,000	21627
WALTER REED AMC	DC	FAMILY HOUSING IMPROVEMENTS	91	AFH	440	21797
Walter Reed AMC	DC	Improve GFOQ	87	AFH	187	129HO
Ft Benning	GA	Urban Terrain Assault Course	90	MCA	1,250	15855
Ft Benning	GA	Barracks Modernization	90	MCA	2,000	32826
Ft Benning	GA	Tactical Equipment Shop	90	MCA	2,600	5169
Ft Benning	GA	Recreation Center	91	MCA	3,000	2288
Ft Benning	GA	Indoor Firing Range	91	MCA	2,930	31966
Ft Benning	GA	Tactical Equipment Shop	91	MCA	4,950	4629
FT GORDON	GA	NEW USARC	91	MCAR	9,534	875
Ft Gordon	GA	Soldier Service Center	91	MCA	10,600	5763
Ft Gordon	GA	Family Practice Clinic	91	BRAC	4,850	32364

Army

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
Germany	GE	Wartime Host Nation Support	91	MCA	2,500	29459
Hohenfels	GE	Upgrade retention Dam	91	UMMCA	802	34387
Hohenfels	GE	OPFOR Vehicle Sheds	89	MCA	9,400	14537
Hohenfels	GE	Child Development Center	89	MCA	1,550	15030
Kaiserslautern	GE	Missile Maintenance Shop	91	MCA	5,000	24030
Ft Ben Harr	IN	Electrical Substation Upgrade	91	BRAC	1,050	31567
Ft Ben Harr	IN	Army Headquarters Building	91	BRAC	19,000	31317
Ft Ben Harr	IN	Fire Station	91	MCA	1,300	10680
Ft Ben Harr	IN	Learning Research Center	91	MCA	4,300	1676
Vincenza	IT	Family Housing Improvements	89	AFH	140	16888
SAGIMIHARA	JA	FAMILY HOUSING IMPROVEMENTS	91	AFH	1,650	18848
Camp Casey	KO	Auto Rifle Range	87	MCA	3,600	933
Cp Carroll	KO	Expand Paint Facility	91	UMMCA	995	32817
Cp Eagle	KO	Dining Hall Addition	91	UMMCA	370	31563
K-16 AAF	KO	Flight Simulator Building	91	MCA	1,500	22035
Various	KO	Washracks (9)	86	MCA	1,810	Var
Ft Knox	KY	Physical Fitness Training Center	90	MCA	5,420	2490
Ft Knox	KY	Air Base Ground Defense Ranges	91	BRAC	5,700	32521
Ft Knox	KY	Multi Purpose Range Complex - Heavy	91	MCA	22,600	27809
Ft Knox	KY	M1 Tank Driver Facility	90	MCA	5,900	9330
Ft Knox	KY	Automated Record Fire Range	91	MCA	2,800	5922
Ft Knox	KY	Barracks Renovation	91	BRAC	3,400	32955
Ft Knox	KY	Air Base Ground Defense School	91	BRAC	5,600	32062
Lex-Blue DA	KY	Chemical Area Security Upgrade	89	MCA	770	12190
Lex-Blue DA	KY	Calibration Facility	91	BRAC	730	33078
Ft Polk	LA	General Purpose Warehouses	90	MCA	1,150	4231
Ft Polk	LA	Range Modernization	90	MCA	9,600	15664
Ft Polk	LA	Consolidated Maintenance Facility	91	MCA	22,000	17120
Ft Polk	LA	General Purpose Warehouse	90	MCA	12,600	20996
FT POLK (LEES	LA	MATES EXPANSION	90	MCNG	3,306	220021
FT DEVENS	MA	REGIONAL TRNG SITE-MAINT	90	MCAR	2,705	1500
Ft Devens	MA	Information Systems Facility	91	BRAC	11,600	31625
Ft Devens	MA	Building Alteration	90	BRAC	4,700	31629
Ft Devens	MA	USAISC Headquarters Building	90	BRAC	17,000	31626
Ft Devens	MA	Upgrade Utilities	91	BRAC	650	33142
Ft Devens	MA	Building Alteration	90	BRAC	4,700	31622
ABERDEEN PG	MD	FAMILY HOUSING IMPROVEMENTS	89	AFH	2,800	338H
ABERDEEN PG	MD	FAMILY HOUSING IMPROVEMENTS	91	AFH	2,800	5037
Aberdeen PG	MD	Toxicology Research Facility	91	MCA	33,000	266
Aberdeen PG	MD	ADP Facility Addition	90	MCA	1,700	19662
Aberdeen PG	MD	Relocate/Modernize Fire Barricades	91	MCA	10,400	1752
Aberdeen PG	MD	Security Upgrade	91	MCA	1,700	62
Ft Detrick	MD	Storage Facility Addition	91	MCA	530	11766
Ft Detrick	MD	Chapel Center/Child Development Center	90	MCA	2,300	14273
Ft Meade	MD	Child Development Center	90	MCA	6,200	6044
Ft Ritchie	MD	FAMILY HOUSING IMPROVEMENTS	91	AFH	980	
Ft Ritchie	MD	ARMORY, 60-PERSON	91	MCNG	1,800	240006
Ft Ritchie	MD	Child Development Center Addition	90	MCA	630	22310
Ft Leo Wood	MO	Instructional Media Center	90	MCA	8,300	8080
Ft Leo Wood	MO	Automated Record Fire Ranges	90	MCA	2,150	5829
Ft Leo Wood	MO	Applied Instruction Building	91	BRAC	10,400	10291
Ft Leo Wood	MO	Applied Instruction Facility	91	MCA	900	33008

Army

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
Ft Leo Wood	MO	Physical Fitness Training Center	91	MCA	8,800	3348
Ft Bragg	NC	Tactical Equipment Shop	91	MCA	11,600	13485
Ft Bragg	NC	Installation Map Depot	91	MCA	1,750	17051
Ft Bragg	NC	Company Ops Fac - Follow-on Contract	88	MCA	2,300	18842
Ft Bragg	NC	Special Operations Command Headquarters	90	MCA	21,100	10277
Ft Bragg	NC	Maintenance Facility (Phase I)	91	MCA	31,800	19177
Ft Bragg	NC	Battalion Headquarters	91	MCA	1,850	7023
Ft Bragg	NC	Tactical Equipment Shop	91	MCA	7,400	28565
Ft Bragg	NC	Land Purchase	91	MCA	720	34881
Ft Bragg	NC	Aviation Unit Maintenance Hangars	90	MCA	32,000	13529
Ft Bragg	NC	Maintenance Facility Infrastructure	90	MCA	7,000	31284
Ft Bragg	NC	SOF Headquarters Addition	91	MCA	4,950	34982
FT DIX	NJ	FAMILY HOUSING IMPROVEMENTS	91	AFH	6,100	17122
FT MONMOUTH	NJ	FAMILY HOUSING IMPROVEMENTS	90	AFH	5,100	10933
Ft Monmouth	NJ	Improve Electrical Distribution	90	MCA	8,600	9151
Picatinny Ars	NJ	Secondary Elec Feeder	91	UMMCA	570	32876
Picatny Ars	NJ	Armament Technology Laboratory	90	MCA	11,800	333
Ft Sill	OK	FAMILY HOUSING IMPROVEMENTS	91	AFH	4,500	327H
Ft Sill	OK	Child Development/Religious Education Fac	90	MCA	4,850	3268
Ft Sill	OK	Firefinder Classroom Addition	90	MCA	970	15216
Ft Sill	OK	Infantry Remote Target System Range	90	MCA	3,400	2061
Ft Sill	OK	FAMILY HOUSING IMPROVEMENTS	89	AFH	4,000	26774
Ft Sill	OK	Communications-Electronics Lab Addn	91	MCA	3,550	11695
Ft Sill	OK	Modernize Sewage Treatment Plant	91	MCA	21,600	14087
Ft Sill	OK	Tactical Equipment Shop	90	MCA	6,100	83
New Cumberland	PA	Hazardous Material Storage Facility	90	MCA	14,000	1069
New Cumberland	PA	Access Roads	89	MCA	5,300	28425
Tobyhnna AD	PA	COMSEC Facility	91	BRAC	13,200	32171
Tobyhnna AD	PA	Satellite Systems Maintenance Facility	91	MCA	6,800	9077
Ft Jackson	SC	Medical/Dental Reception Processing	91	BRAC	2,450	32054
Ft Jackson	SC	Applied Instruction Building	91	BRAC	10,000	31827
Ft Jackson	SC	Automated Record Fire Range	91	MCA	1,600	12719
Loc 276, TU	TU	Operations Facility	89	MCA	5,300	149
Cor Chr AD	TX	Aircraft Instrument Calibration Facility	90	MCA	5,200	1013
FT BLISS	TX	FAMILY HOUSING NEW CONSTRUCTION	89	AFH	9,100	26862
Ft Bliss	TX	Renovate Enlisted Barracks	91	MCA	9,800	33758
Ft Bliss	TX	Renovate Enlisted Barracks/Dining Facility	91	MCA	10,200	5859
Ft Hood	TX	Barracks Modernization	91	MCA	11,000	22610
Ft Hood	TX	Battalion Headquarters	90	MCA	2,800	5920
Ft Hood	TX	Replace Vehicular Bridges	91	MCA	469	32014
Ft Hood	TX	Modified Record Fire Range	91	MCA	1,650	4718
Ft Hood	TX	Consolidated Maintenance Facility	91	MCA	22,700	8939
Ft Hood	TX	Vehicle Wash Facility	90	MCA	7,000	26182
Ft Hood	TX	Range Modernization	91	MCA	3,050	13707
Ft Hood	TX	Range Control Facility	91	MCA	4,400	7152
Ft Hood	TX	FAMILY HOUSING IMPROVEMENTS	91	AFH	6,500	9320
Ft Sam Hous	TX	Physical Fitness Training Center	91	MCA	7,100	2526
Ft Sam Hous	TX	Consolidated Maintenance Facility	91	MCA	13,200	12204
Ft Sam Hous	TX	Medical Research Laboratory	91	MCA	13,400	11417
Tooele AD	UT	Alter Shops to Warehouses	91	BRAC	5,600	32167
Tooele AD	UT	General Supply Warehouse	91	BRAC	3,850	32166
Tooele AD	UT	Ammunition Demilitarization Support Fac	91	MCA	11,800	32497

Army

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
Ft Belvoir	VA	Fixed Wing Runway	91	MCA	1,400	17480
Ft Belvoir	VA	Headquarters Complex	91	BRAC	21,000	32041
Ft Belvoir	VA	Building Improvements	91	BRAC	1,000	35440
Ft Belvoir	VA	Fire Station	91	MCA	1,100	18122
Ft Belvoir	VA	Access Roads	91	MCA	3,000	31321
Ft Myer	VA	Exchange Branch	91	BRAC	1,600	32663
Ft Myer	VA	Child Development Center	91	MCA	2,150	25248
Ft Myer	VA	FAMILY HOUSING NEW CONSTRUCTION	86	AFH	490	127H
Ft Myer	VA	Shoppette	91	BRAC	850	32001
Ft Lewis	WA	Chapel Center	91	MCA	2,850	16714
Ft Lewis	WA	Tactical Support Center	91	MCA	5,100	6995
Ft Lewis	WA	Administration Facility	91	BRAC	1,300	32093
Ft Lewis	WA	Brigade Headquarters	91	MCA	8,800	12044
Ft Lewis	WA	Automated Record Fire Range	91	MCA	1,250	2314
Ft Lewis	WA	FAMILY HOUSING IMPROVEMENTS	90	AFH	2,150	12339

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
AKIACHAK	AK	ARMORY, SCOUT EXPANSION	91	MCNG	275	020080
CAMP CARROLL	AK	TRNG SITE, LATRINES	91	MCNG	866	020075
Ft Wainwght	AK	Battalion Headquarters	89	MCA	2,300	14410
Ft Wainwght	AK	Utilities Expansion	91	MCA	3,300	23589
Ft Wainwght	AK	Consolidated Fuel Facility	91	MCA	2,300	15277
Ft Wainwright	AK	Elementary School	91	MCA	8,300	35772
FT WAINWRIGHT	AK	FAMILY HOUSING IMPROVEMENTS	90	AFH	1,500	33627
GOLOVIN	AK	ARMORY, SCOUT, NEW	91	MCNG	275	020069
HOOPER BAY	AK	ARMORY, SCOUT, EXPANSION	90	MCNG	267	020077
KASIGLUK	AK	ARMORY, SCOUT EXPANSION	91	MCNG	275	020081
ALICEVILLE	AL	ARMORY, 60-PERSON	90	MCNG	709	010060
BIRMINGHAM	AL	AVN POL JOINT USE ANG DESIGNING	90	MCNG	400	010090
BREWTON	AL	ARMORY, 100-PERSON	91	MCNG	903	010018
CITRONELLE	AL	ARMORY, 100 PERSON	90	MCNG	932	010005
HUNTSVILLE	AL	ARMORY, 100 PERSON	90	MCNG	886	010030
MARION	AL	ARMORY	91	MCNG	764	010024
MOBILE	AL	NEW USARC / OMS	91	MCAR	3,100	1396
SELMA	AL	ARMORY	91	MCNG	1,447	010031
SELMA	AL	OMS	91	MCNG	587	010037
CAMDEN	AR	ARMORY, 60 PERSON	90	MCNG	647	050013
CAMP ROBINSON	AR	TRNG SITE PEC, QUARTERS, PH VII	91	MCNG	6,950	050010
CAMP ROBINSON	AR	MARKSMENSHIP UNIT ADMIN FACIL	90	MCNG	399	050087
CAMP ROBINSON	AR	TRNG SITE, TROOP COMPLEX, PH II	91	MCNG	4,025	050027
Pine Bl Ars	AR	Detection Paper Facility	91	MCA	1,600	23899
Pine Bl Ars	AR	Chemical Area Security Upgrade	89	MCA	3,050	18072
MARANA	AZ	AVN, SIMULATOR BLDG (NOT AUTH)	91	MCNG	4,554	040074
PAPAGO MIL RESE	AZ	AASF VAPOR REC SYS	90	MCNG	235	040053
PHOENIX	AZ	USPFO OFFICE	91	MCNG	1,994	040026
PHOENIX	AZ	USPFO WAREHOUSE	91	MCNG	1,605	040012
SHOWLOW	AZ	OMSS 4A	90	MCNG	500	040045
CAMP ROBERTS	CA	TRNG SITE, HQ BUILDING, PH X	90	MCNG	765	060072
CAMP ROBERTS	CA	MATES ADD/ALT	90	MCNG	6,014	060060
CAMP ROBERTS	CA	MATES DRAINAGE	90	MCNG	399	060094
CAMP SAN LUIS O	CA	TRNG SITE, BARRACKS	91	MCNG	9,140	060099
CAMP SAN LUIS O	CA	RANGE, MAC	90	MCNG	842	060063
Ft Irwin	CA	Dining Facility	90	MCA	3,350	13395
Ft Irwin	CA	Hardstand/Tactical Equipment Shop	91	MCA	4,200	21564
LONG BEACH	CA	CSMS PAINT SHOP VENTILATION	90	MCNG	250	060066
LOS ALAMITOS	CA	AFA	90	MCAR	9,792	1573
LOS ALAMITOS	CA	AVN ADDITION/ALTERATION	90	MCNG	1,212	060059
Oakland AB	CA	Group Headquarters Facility	91	BRAC	1,050	32626
Oakland AB	CA	PSF Ready Group Facility	91	BRAC	2,300	32614
Oakland AB	CA	Operations Building	91	BRAC	120	33129
PARKS RFTA	CA	REGIONAL TNG CTR-MED	90	MCAR	2,777	1523
Parks RFTA	CA	Consolidated Training Facility	91	BRAC	4,900	32569
PITTSBURG	CA	OMS #29 ALTERATIONS	90	MCNG	324	060061

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
SACRAMENTO (MAT	CA	ARMORY, 200 PERSON	90	MCNG	2,146	060006
SACRAMENTO (MAT	CA	AVN AASF C-12 AIRCRAFT HANGAR	90	MCNG	498	060049
SAN LUIS OBISPO	CA	USPFO ROOF REPAIR	90	MCNG	686	060141
DURANGO	CO	ARMORY, 60 PERSON	90	MCNG	906	080006
Falcon AFB	CO	Satellite Control Certification Facility	91	MCA	1,450	31074
Fitzsimons AMC	CO	Child Development Center	90	MCA	2,100	25426
MONTROSE	CO	ARMORY, 60-PERSON	90	MCNG	1,698	080024
WATKINS	CO	ARMORY	91	MCNG	2,441	080032
CAMP O'NEILL	CT	TRNG SITE, BKS/ADM/SUP/LAT PH II	91	MCNG	2,900	090003
West Hartford	CT	Land Acquisition	90	MCAR	Lump Sum	07685
BROOKVILLE	FL	ARMORY, 60 PERSON	91	MCNG	858	120041
CAMP BLANDING	FL	TRNG SITE MILITARY EDUCATION FAC	90	MCNG	1,276	120031
Key Wst NAS	FL	Special Forces Training Facility	90	MCA	8,500	15994
St Petersburg	FL	Land Acquisition	90	MCAR-	Lump Sum	01372
TALLAHASSEE	FL	ARMORY, ADDITION	91	MCNG	1,200	120033
FT GILLEM	GA	C T F	90	MCAR	1,952	529
FT GILLEM (AT	GA	ARMORY, 800 PERSON	89	MCNG	3,210	130003
Ft Stewart	GA	Pave Tank Trails	90	MCA	2,700	9170
Ft Stewart	GA	Child Development Center	91	MCA	1,650	2439
WINDER	GA	ARMORY, ADDITION/ALTERATION	90	MCNG	958	130012
WINDER	GA	OMS ADD/ALT	90	MCNG	284	130021
APRA HTS	GU	EXP USARC / NEW WHSE	90	MCAR	975	1403
Ft Shafter	HI	New OMS/DS-GS w/Washrack	84	MCAR	7,477	1895
Ft Shafter	HI	EXP WAREHOUSE	91	MCAR	1,300	1599
Ft Shafter	HI	Barracks with Dining Facility	90	MCA	9,300	22862
Ft Shafter	HI	Access Roads	91	MCA	7,400	28434
Hickam AFB	HI	AAFES Warehouse	91	BRAC	8,100	31989
OAHU	HI	FAMILY HOUSING NEW CONSTRUCTION	91	AFH	15,000	30275
Pearl Harbor	HI	FAMILY HOUSING IMPROVEMENTS	91	AFH	3,300	14461
Schofield Bks	HI	Military Operations on Urbanized Terrain	90	MCA	5,600	7084
Schofield Bks	HI	Non-TOE Maintenance Facility	91	BRAC	7,600	32369
Schofield Bks	HI	Army Continuing Education Center	91	MCA	9,700	10315
Schofield Bks	HI	Multi-Purpose Machine Gun Range	90	MCA	4,400	17804
WAHIAWA	HI	ARMORY ADDITION	91	MCNG	4,347	150016
CAMP DODGE	IA	MVSB (FOR STARC ARMORY)	91	MCNG	1,338	190048
CAMP DODGE	IA	TRG SITE, ACCESS ROAD, PH I	91	MCNG	3,200	190070
CAMP DODGE	IA	ARMORY (STARC)	91	MCNG	8,635	190026
CAMP DODGE	IA	LAND ACQUISITION (1469 AC)	90	MCNG	6,857	190027
CAMP DODGE	IA	TRNG SITE, ACCESS ROAD, PH I	91	MCNG	3,200	190070
CAMP DODGE (JOH	IA	MVSB (FOR STARC ARMORY)	91	MCNG	1,338	190048
CORNING	IA	ARMORY 100-PERSON	91	MCNG	1,008	190021
COUNCIL BLUFFS	IA	ARMORY	91	MCNG	2,115	190051
COUNCIL BLUFFS	IA	OMS	91	MCNG	528	190052
OSKALOOSA	IA	ARMORY, 100-PERSON	91	MCNG	1,306	190022
BOISE	ID	NEW USARC / ECS / AMSA	91	MCAR	7,227	327
GOWEN FIELD	ID	MATES	90	MCNG	7,618	160007
GOWEN FIELD	ID	TRNG SITE, MATES SPT & WASH FACI	90	MCNG	3,429	160008
DECATUR	IL	OMS	90	MCNG	546	170035
DECATUR	IL	ARMORY, 200-PERSON	90	MCNG	2,758	170017
FREEPORT	IL	ARMORY, ADDITION/ALTERATION	90	MCNG	375	170004
MACHESNEY PARK-	IL	ARMORY, 200-PERSON	90	MCNG	2,920	170069
MACHESNEY PARK-	IL	OMS	90	MCNG	586	170070

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
MARSEILLES	IL	TRNG ROAD INCREMENT 2C	90	MCNG	325	170010
Price SptCr	IL	Barracks Mod w/Dining Facility	90	MCA	3,750	24471
URBANA	IL	ARMORY, REHAB	90	MCNG	865	170023
WILLIAMSON COUN	IL	ARMORY, 200 PERSON	90	MCNG	2,152	170034
WILLIAMSON COUN	IL	OMS	90	MCNG	440	170040
WOODSTOCK	IL	ARMORY	91	MCNG	1,597	170027
CAMP ATTERBURY	IN	RANGE, MODIFIED RECORD FIRE(RETS	91	MCNG	1,100	180028
KNOX	IN	ARMORY, 100-PERSON	91	MCNG	1,376	180016
KNOX	IN	AVN LAASF (LIMITED)	91	MCNG	3,050	180014
SOUTH BEND	IN	USARC / OMS	91	MCAR	397	4998
STOUT FIELD	IN	DLOG ADDITION	90	MCNG	742	180011
Ft Leavenworth	KS	FAMILY HOUSING IMPROVEMENTS	90	AFH	10	30284
Ft Leavenworth	KS	Child Development/Religious Education Fac	90	MCA	5,500	9578
Ft Leavenworth	KS	FAMILY HOUSING IMPROVEMENTS	91	AFH	10	30287
Ft Leavenworth	KS	General Instruction Building	91	MCA	34,000	11362
Ft Riley	KS	Multi-Purpose Machine Gun Range	91	MCA	2,700	9185
Ft Riley	KS	Tactical Equipment Shop	91	MCA	12,200	6643
FT RILEY	KS	FAMILY HOUSING NEW CONSTRUCTION	91	AFH	12,500	35141
FT RILEY	KS	ADD/ALT ECS & AMSA NEW WHSE	90	MCAR	4,028	1238
Ft Riley	KS	Child Development Center	90	MCA	1,500	23867
IOLA	KS	OMS # 2 ADDITION	91	MCNG	399	200027
SALINA	KS	TRNG SITE, REGIONAL MAINTENANCE	91	MCNG	1,667	200023
TOPEKA	KS	USPFO	90	MCNG	1,400	200021
Kwajalein	KW	Document Control Facility Addition	90	MCA	1,650	20632
Kwajalein	KW	Sewage Treatment Plant	90	MCA	3,250	23501
ASHLAND	KY	ARMORY, 200 PERSON	90	MCNG	2,464	210003
Ft Campbell	KY	Machine Gun Transition Range	91	MCA	1,050	24142
Ft Campbell	KY	Modified Record Fire Range	91	MCA	1,250	4313
Ft Campbell	KY	Tactical Equipment Shop	90	MCA	14,200	9148
BOGALUSA	LA	OMS	91	MCNG	783	220019
CAMP BEAUREGARD	LA	OMS #4	91	MCNG	680	220023
Columbia	LA	Armory	89	MCNG	1,054	220017
LAKE CHARLES	LA	EXP USARC / OMS	91	MCAR	1,883	176
NEW ORLEANS (JA	LA	ARMORY (STARC ANNEX)	91	MCNG	3,628	220036
CHESTERTOWN(FLO	MD	ARMORY, REHAB/ADD	90	MCNG	1,129	240010
LAUREL	MD	ARMORY	91	MCNG	5,000	240012
BANGOR	ME	ARMORY, AFRC	91	MCNG	3,058	230004
BANGOR	ME	EXP AFRC	91	MCAR	1,138	394
BOG BROOK-RILEY	ME	LAND ACQUISITION	91	MCNG	299	230015
BAY CITY	MI	EXP USARC / OMS	90	MCAR	3,631	268
BERRIEN CTY-BEN	MI	ARMORY, 60-PERSON	90	MCNG	1,250	260096
CAMP GRAYLING	MI	RANGE, MPRC-H MULTIPURPOSE (RETS	90	MCNG	7,000	260009
Detroit Ars	MI	Laboratory and Test Building	91	BRAC	6,200	32490
MENOMINEE	MI	ARMORY, 60-PERSON	90	MCNG	1,167	260045
SHIAWASSEE CTY	MI	ARMORY, 100-PERSON	90	MCNG	1,450	260014
WAYNE COUNTY	MI	ARMORY, 400-PERSON	91	MCNG	2,634	260043
WAYNE COUNTY (D	MI	OMS #6	91	MCNG	470	260101
CAMP RIPLEY	MN	TRNG FACILITIES, AREA 7	90	MCNG	8,800	270114
CAMP RIPLEY	MN	TRANSFER STATION	90	MCNG	396	270027
CAMP RIPLEY	MN	NATURAL GAS CONV	90	MCNG	399	270065
CAMP RIPLEY	MN	MATES ADD	91	MCNG	6,108	270050
MINNEAPOLIS (BR	MN	ARMORY, 200-PERSON	91	MCNG	1,864	270006

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
WALKER	MN	ALT / EXP USARC /OMS	91	MCAR	2,159	303
AURORA	MO	ARMORY, 100-PERSON	90	MCNG	1,182	290015
FORT CROWDER	MO	TRNG SITE, POST/ENG SUPPLY BUILD	90	MCNG	357	290006
JEFFERSON CITY	MO	CSMS	91	MCNG	7,880	290071
JEFFERSON CITY	MO	TRNG SITE MILITARY EDUCATION FAC	91	MCNG	2,329	290080
JEFFERSON CITY	MO	USPFO WHSE	91	MCNG	2,800	290072
JEFFERSON CITY	MO	OMS	91	MCNG	942	290070
JEFFERSON CITY	MO	TRNG SITE, REGIONAL MAINT	90	MCNG	2,395	290042
JEFFERSON CITY	MO	ARMORY, 400-PERSON	91	MCNG	5,049	290034
ACKERMAN	MS	ARMORY, ADD/ALT	90	MCNG	735	280044
AMORY	MS	ARMORY, 100-PERSON ADDITION	90	MCNG	910	280098
CAMP MCCAIN	MS	TRNG SITE, AMMO STORAGE	91	MCNG	500	280134
CAMP MCCAIN	MS	TRNG SITE TISA	91	MCNG	780	280022
CAMP MCCAIN	MS	TRNG SITE, NATURAL GAS DISTRIBUT	89	MCNG	500	280155
CAMP MCCAIN	MS	RANGE, TANK TABLE 9&11	91	MCNG	600	280157
CAMP MCCAIN	MS	LAND ACQUISTION	90	MCNG	4,000	280130
CAMP MCCAIN	MS	TRNG SITE, HELICOPTER	89	MCNG	1,029	280154
CAMP MCCAIN	MS	TRNG SITE, WASTE WATER RENOVATIO	89	MCNG	500	280156
CAMP SHELBY	MS	TRNG, ENGR BUILDING 6678	90	MCNG	400	280087
CAMP SHELBY	MS	TRNG SITE, BOQ PHASE III (04-06)	91	MCNG	450	280101
CAMP SHELBY	MS	CSMS # 1	91	MCNG	3,907	280118
CAMP SHELBY	MS	TRNG BOQ PHASE I (04-06)	90	MCNG	700	280091
CAMP SHELBY	MS	RANGE, M-16 NIGHT FIRE	90	MCNG	300	280063
CAMP SHELBY	MS	TRNG SITE, ASP CLASS BLDG	91	MCNG	280	280149
FLOWOOD (JACKSO	MS	USPFO ADDITION	90	MCNG	1,300	280026
FULTON	MS	ARMORY, ADD/ALT	91	MCNG	535	280051
GRENADA	MS	TRNG MUNICIPAL AIRPORT IMPROVEME	90	MCNG	3,732	280147
IUKA	MS	ARMORY, ADD/ALT	90	MCNG	710	280049
LOUISVILLE	MS	OMS ADD	90	MCNG	600	280133
PHILADELPHIA	MS	OMS ADD	90	MCNG	400	280005
STARKVILLE	MS	ARMORY, ADD/ALT	91	MCNG	975	280039
VICKSBURG	MS	EXP / ALT USARC /OMS	91	MCAR	6,978	589
LIBBY	MT	ARMORY, 60-PERSON	90	MCNG	827	300041
CLINTON	NC	ARMORY, 400-PERSON	91	MCNG	1,603	370023
GOLDSBORO	NC	OMS # 15	91	MCNG	394	370029
GOLDSBORO	NC	ARMORY, 200-PERSON	91	MCNG	1,663	370026
BISMARCK	ND	USPFO WAREHOUSE	90	MCNG	1,011	380026
CAMP GRAFTON	ND	CSMS ADDITION	91	MCNG	1,595	380011
FARGO	ND	ARMORY, ARMED FORCES RESERVE CTR	91	MCNG	7,700	380006
CAMP ASHLAND	NE	UTILITIES IMPROV	90	MCNG	399	310043
CAMP ASHLAND	NE	LAND ACQUISITION	91	MCNG	303	310028
HASTINGS	NE	RANGE, MULTIPURPOSE INDOOR	90	MCNG	336	310023
LINCOLN	NE	AVN AASF PARKING	90	MCNG	597	310013
LINCOLN	NE	CSMS	90	MCNG	3,438	310008
LINCOLN	NE	ARMORY, 800-PERSON	90	MCNG	4,984	310011
Concord	NH	Land Acquisition	89	MCAR	285	07668
NEWTON	NJ	RANGE, MINI TANK	90	MCNG	251	340037
VINELAND	NJ	RANGE, MINI TANK	90	MCNG	214	340035
WASHINGTON	NJ	RANGE, MINI TANK	90	MCNG	188	340036
ALBUQUERQUE	NM	TRNG SITE UTILITIES, HAWK BN	91	MCNG	2,127	350063
ALBUQUERQUE	NM	TRNG SITE, HAWK BN	91	MCNG	1,549	350039
Albuquerque	NM	Land Acquisition	87	MCAR	600	5522Y

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
ALBUQUERQUE	NM	OMS (HAWK)	91	MCNG	1,950	350035
BELEN	NM	ARMORY, 100-PERSON	90	MCNG	1,397	350014
CLOVIS	NM	ARMORY	90	MCNG	1,603	350012
CLOVIS	NM	OMS	90	MCNG	714	350047
ESPANOLA	NM	ARMORY, 100-PERSON	91	MCNG	1,600	350011
FARMINGTON	NM	ARMORY, 100-PERSON	90	MCNG	1,163	350026
PORTALES	NM	ARMORY, 100-PERSON	91	MCNG	1,600	350010
RIO PUERTO (ALB	NM	ARMORY, 800-PERSON	91	MCNG	3,400	350018
ROSWELL	NM	OMS	90	MCNG	714	350024
SANTA FE	NM	USPFO, WAREHOUSE	90	MCNG	905	350020
SANTA FE	NM	OMS	91	MCNG	850	350072
SANTA FE	NM	ALT / EXP USARC	90	MCAR	3,601	895
SANTA FE	NM	CSMS	90	MCNG	3,092	350021
SPRINGER	NM	OMS	90	MCNG	714	350041
CARSON CITY	NV	CSMS	91	MCNG	3,048	320009
CARSON CITY	NV	OMS	91	MCNG	676	320019
Hawthrn AAP	NV	Truck Inspection/Parking Area	91	BRAC	520	16877
STEAD (RENO)	NV	AVN AASF ADDITION PH II	90	MCNG	1,000	320017
BRONX	NY	ALT / EXP USARC / OMS	91	MCAR	8,099	1260
Ft Drum	NY	General Instruction Building	91	MCA	608	28270
Ft Drum	NY	Central Wash Facility	91	MCA	8,800	14232
Ft Totten	NY	Add/Alter OMS	88	MCAR	6,902	1369
GUILDERLAND	NY	RANGE, MAC (MOUT ASSAULT COURSE)	91	MCNG	800	360090
USMA	NY	Regional Sewage System Connection	89	MCA	2,500	13602
WEST POINT	NY	FAMILY HOUSING IMPROVEMENTS	91	AFH	1,100	17625
West Point	NY	Steam Line - Hospital	91	UMMCA	135	33579
West Point	NY	Steam Line - Laundry	91	UMMCA	709	33576
KENTON	OH	ALT / EXP USARC / OMS	91	MCAR	2,804	351
MUSKINGUM CTY (	OH	LAND ACQUISITION (16,200 AC)	91	MCNG	5,670	390005
TOLEADO	OH	USARC / OMS	91	MCAR	7,300	4004
BROKEN ARROW	OK	ARMORY, 100-PERSON	90	MCNG	1,045	400029
CAMP GRUBER	OK	TRNG SITE BKS / MS / UTIL PH IV	90	MCNG	3,752	400062
CAMP GRUBER	OK	RANGE, KNOWN DISTANCE	90	MCNG	427	400033
CAMP GRUBER	OK	TRNG SITE, WATER TREATMENT PLANT	91	MCNG	1,204	400007
CAMP GRUBER	OK	RANGE, MODIFIED RECORD FIRE(RETS	90	MCNG	356	400031
CAMP GRUBER	OK	TRNG SITE, TNG FAC PH III	91	MCNG	3,332	400061
CAMP GRUBER (BR	OK	TRNG SITE, POST HEADQUARTERS	90	MCNG	265	400074
CAMP GRUBER (BR	OK	TRNG SITE, WAREHOUSE 9600 SQ.FT	90	MCNG	320	400079
OWASSO (SAND SP	OK	OMS # 6	90	MCNG	400	400022
CAMP RILEA	OR	AMMO STORAGE FACIL	90	MCNG	345	410009
CAMP RILEA	OR	RANGE, ARF (RETS)	91	MCNG	913	410015
CAMP RILEA (WAR	OR	TRNG SITE,MEDICAL TROOP TRAINING	91	MCNG	312	410014
MONMOUTH	OR	TRNG SITE, MILITARY ED FACIL	91	MCNG	4,060	410005
PENDLETON	OR	ARMORY, 200-PERSON	91	MCNG	1,542	410004
PORTLAND (KLEIV	OR	ARMORY, ADD/ALT	90	MCNG	1,444	410061
REDMOND	OR	RANGE, 50 METER BAFFLED, 39 LANE	91	MCNG	971	410037
BUTLER	PA	ARMORY	91	MCNG	2,223	420042
Carlisle Bk	PA	Child Development Center	91	MCA	1,200	21436
Carlisle Bk	PA	Center for Strategic Wargaming	91	MCA	25,000	21435
FT INDIANTOWN	PA	TRNG SITE, REG MED TNG FACIL	90	MCNG	1,551	420012
Ft Indt Gap	PA	Cold Storage Warehouse	91	MCA	5,000	22518
Ft Indt Gap	PA	Ammunition Supply Point	91	MCA	1,350	9223

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
FT INDTOWN GAP	PA	REGIONAL TRNG SITE-MAINT	90	MCAR	2,600	1561
Ft Indtwn Gap	PA	Ammunition Storage	91	BRAC	1,750	32206
JOHNSTOWN	PA	USARC / OMS	90	MCAR	4,053	1587
NEW CASTLE	PA	Exp/Alt USARC/OMS	91	MCAR	1,418	213
NORRISTOWN	PA	ARMORY, 200 PERSON	91	MCNG	3,028	420006
CAMP SANTIAGO	PR	RANGE, MOD RECORD FIRE (RETS)	91	MCNG	1,000	430006
FT BUCHANAN	PR	FAMILY HOUSING IMPROVEMENTS	90	AFH	5,100	10055
Ft Buchanan	PR	Physical Fitness Center	90	MCA	2,800	3687
COLUMBIA	SC	USPFO OFFICE EXPAN	90	MCNG	399	450035
EASTOVER (CONGA	SC	ARMORY	90	MCNG	1,500	450031
FOUNTAIN INN	SC	ARMORY	91	MCNG	2,000	450057
GREENVILLE	SC	OMS	91	MCNG	1,800	450095
GREENVILLE	SC	ARMORY	91	MCNG	2,500	450019
GREENWOOD (WARE	SC	ARMORY	91	MCNG	2,000	450058
PICKENS	SC	ARMORY	91	MCNG	2,000	450056
PINE RIDGE (LEX	SC	ARMORY, 200-PERSON	90	MCNG	2,175	450010
CAMP RAPID (RAP	SD	TRNG SITE, BOQ/BEQ FACIL	90	MCNG	438	460025
MITCHELL	SD	ARMORY,ADD/ALT	91	MCNG	954	460003
PIERRE	SD	RANGE, M-16/PISTOL BAFFLED	90	MCNG	350	460031
SIOUX FALLS	SD	ARMORY, 100-PERSON	90	MCNG	1,836	460005
WATERTOWN	SD	RANGE, M-16/PISTOL BAFFLED	90	MCNG	350	460032
BOLIVAR	TN	ARMORY ADD	90	MCNG	210	470121
BROWNSVILLE	TN	ARMORY, 60-PERSON	90	MCNG	992	470040
CARTHAGE	TN	ARMORY, 100-PERSON	90	MCNG	997	470018
CLINTON	TN	ARMORY	90	MCNG	1,160	470058
HUMBOLDT	TN	ARMORY, 200-PERSON	90	MCNG	1,453	470064
HUNTINGDON	TN	ARMORY, 100-PERSON	91	MCNG	1,319	470009
JACKSBORO	TN	ARMORY, 100-PERSON	90	MCNG	1,106	470016
JACKSON	TN	AVN LIMITED AASF	90	MCNG	1,636	470141
JACKSON	TN	ARMORY, ADD/ALT	91	MCNG	898	470077
JOHN SEVIER RAN	TN	LAND ACQUISITION	91	MCNG	294	470106
KNOXVILLE	TN	LAND ACQ (60 AC)	91	MCNG	294	470106
LENOIR CITY	TN	ARMORY, 60-PERSON	91	MCNG	1,230	470008
SELMER	TN	ARMORY, 60-PERSON	90	MCNG	751	470026
SMYRNA	TN	TRNG SITE MILITARY EDUCATION FAC	90	MCNG	856	470039
WINCHESTER	TN	ARMORY, 100-PERSON	91	MCNG	1,023	470027
ADDICKS	TX	OMS	91	MCNG	873	480067
ADDICKS	TX	ARMORY	91	MCNG	4,527	480045
AUSTIN (CAMP MA	TX	ARMORY, 800-PERSON (STARC)	91	MCNG	6,284	480023
BROWNWOOD (CAMP	TX	ARMORY	91	MCNG	2,142	480071
CAMP BOWIE	TX	TRNG SITE BKS/ADMIN/SPLY/MESS	90	MCNG	1,341	480068
CAMP BOWIE (BRO	TX	TRNG SITE, LAND ACQUISITION	91	MCNG	1,901	480106
CAMP BOWIE (BRO	TX	LAND ACQUISITION	90	MCNG	1,750	480091
CAMP MAXEY	TX	RANGE, MODIFIED RECORD FIRE(RETS	91	MCNG	1,000	480049
Camp Swift	TX	Seal Manholes	91	MCA	100	35288
DALLAS NAS	TX	ARMORY, ADD/ALT	90	MCNG	2,562	480051
DALLAS NAS	TX	OMS	90	MCNG	479	480039
DALLAS #3 (REDB	TX	ARMORY ADD/ALT	91	MCNG	2,000	480069
FORT HOOD NORTH	TX	MATES ADD	91	MCNG	14,369	480063
FORT WORTH	TX	CSMS	91	MCNG	3,439	480032
LAREDO	TX	ARMORY	90	MCNG	2,263	480046
Red Rivr AD	TX	Central Distribution Center - Phase III	90	MCA	39,000	24744

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
ROSENBURG	TX	ARMORY	90	MCNG	943	480075
TEMPLE	TX	ARMORY, 200-PERSON	90	MCNG	3,040	480043
TEMPLE	TX	OMS	90	MCNG	752	480041
WACO	TX	OMS	91	MCNG	726	480040
WACO	TX	ARMORY, ADD/ALT	91	MCNG	2,162	480016
WYLIE (MC KINNE	TX	ARMORY, 60-PERSON	91	MCNG	2,227	480011
Classified Loc	US	Land Acquisition - SOF	90	MCA	600	33178
CAMP WILLIAMS	UT	RANGE, MODIFIED RECORD FIRE(RETS	91	MCNG	1,070	490039
Dugway PG	UT	Vehicle Maintenance Facility	90	MCA	1,400	13068
Dugway PG	UT	Simulant Mixing Facility	91	MCA	450	17535
LOGAN	UT	ARMORY, ADD/ALT	91	MCNG	788	490038
WEST JORDAN (SL	UT	AVN, AASF ADD	91	MCNG	6,952	490085
WEST JORDON	UT	ARMORY	91	MCNG	4,145	490003
WEST JORDON	UT	OMS	91	MCNG	799	490068
COVINGTON	VA	ALT / EXP USARC	91	MCAR	1,654	439
EMPORIA	VA	ARMORY, 60-PERSON	91	MCNG	1,697	510023
Ft A P Hill	VA	Ammunition Storage	91	BRAC	1,700	32208
Ft A P Hill	VA	Fuel Storage Facility	91	MCA	3,200	9912
Ft Eustis	VA	Harbor Control Facility	91	MCA	530	15981
Ft Lee	VA	Family Housing Improvements	90	AFH	1,500	
Ft Lee	VA	Food Service Training Facility Addition	91	MCA	520	32980
Ft Lee	VA	FAMILY HOUSING NEW CONSTRUCTION	90	AFH	160	26602
Ft Lee	VA	Physical Fitness Training Center	91	BRAC	3,150	31334
Ft Lee	VA	Child Development Center	90	MCA	1,750	14124
Ft Lee	VA	Enlisted Petroleum Training Facility	90	MCA	8,300	3252
Ft Lee	VA	Family Housing Improvements	90	AFH	30	
Ft Lee	VA	Utilities Upgrade	91	BRAC	2,600	31358
Ft Lee	VA	Enlisted Personnel Dining Facility	91	BRAC	2,300	31327
Ft Lee	VA	Enlisted Barracks	90	BRAC	5,900	32220
Ft Lee	VA	Food Service Training Facility	91	BRAC	3,600	31326
Ft Monroe	VA	Child Development Center	90	MCA	1,100	15548
Ft Story	VA	Emergency Services Building	91	MCA	1,600	3256
FT STORY	VA	FAMILY HOUSING IMPROVEMENTS	91	AFH	2,500	7065
NEWPORT NEWS	VA	ARMORY, 200-PERSON	91	MCNG	2,481	510024
SANDSTON (BYRD	VA	AVN AASF ADD/ALT PH II PARKING	91	MCNG	2,515	510047
WOODSTOCK	VA	ARMORY (NO STATE FUNDS)	91	MCNG	1,493	510070
ALEXANDER HAMIL	VI	AVN AAOF REPLACEMENT	90	MCNG	1,138	520013
ST CROIX	VI	CSMS TEMPORARY	90	MCNG	408	520017
ST. CROIX	VI	USPFO OFFICE	90	MCNG	2,068	520009
ST. CROIX	VI	CSMS	90	MCNG	2,961	520007
ETHAN ALLEN	VT	RANGE, MULTIPURPOSE TANK (RETS)	90	MCNG	2,398	500008
EVERETT / SNOHO	WA	OMS #3	91	MCNG	345	530001
TACOMA (WATERCR	WA	TRNG SITE, PIER FACILITY ACQ/RHA	91	MCNG	2,863	530029
YAKIMA	WA	ARMORY, 100-PERSON	90	MCNG	2,182	530016
YAKIMA FIRING C	WA	OMS #8	90	MCNG	333	530003
BELOIT	WI	ARMORY	91	MCNG	2,200	550117
Ft McCoy	WI	Cold Storage Warehouse	91	MCA	5,000	18959
Ft McCoy	WI	Central Fuel Storage Facility	91	MCA	5,500	12281
Ft McCoy	WI	Central Wash Facility	91	MCA	5,000	8797
FT MCCOY	WI	REGIONAL TNG CTR-MED	91	MCAR	2,258	789
Ft McCoy	WI	Multi-Purpose Training Range	91	MCA	8,900	5893
MADISON (MITCHE	WI	ARMORY, STARC	91	MCNG	7,372	550021

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LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)	PROJECT NUMBER
NEW RICHMOND	WI	ARMORY, 100-PERSON	90	MCNG	1,241	550030
RICHLAND CENTER	WI	ARMORY, 60-PERSON	91	MCNG	1,000	550032
RICHLAND CENTER	WI	MVSB MOTOR VEHICLE STORAGE BUILD	91	MCNG	159	550040
WAUKESHA	WI	MVSB MOTOR VEHICLE STORAGE BUILD	91	MCNG	228	550094
WAUKESHA	WI	ARMORY, ADD/ALT	91	MCNG	1,113	550066
WHITEWATER	WI	ARMORY, 100-PERSON	90	MCNG	1,181	550028
WHITEWATER	WI	MVSB MOTOR VEHICLE STORAGE	90	MCNG	306	550039
WHITEWATER	WI	OMS	90	MCNG	764	550034
Beckley	WV	Land Acquisition	89	MCAR	220	07682
BECKLEY	WV	NEW USARC	90	MCAR	3,445	335
Bluefield	WV	Land Acquisition	91	MCAR	Lump Sum	07459
BUCKHANNON	WV	USPFO ADD/ALT	90	MCNG	1,500	540063
BUCKHANNON	WV	USPFO OFFICE ADDITION	89	MCNG	325	540015
CAMP DAWSON	WV	TRNG SITE, TRNG FACIL PH IV	91	MCNG	2,500	540004
CAMP DAWSON, KI	WV	LAND ACQUISITION VOLKSTONE PROPE	90	MCNG	1,868	540052
Charleston	WV	Land Acquisition	90	MCAR	900	07722
CHARLESTON	WV	ARMORY, 200-PERSON	91	MCNG	2,900	540013
Charleston	WV	New USARC/OMS	91	MCAR	5,000	
Clarksburg-AMSA	WV	Land Acquisition	91	MCAR	Lump Sum	07724
Clarksburg-USAR	WV	Land Acquisition	91	MCAR	Lump Sum	07728
ELKINS	WV	NEW USARC	90	MCAR	1,772	343
Elkins	WV	Land Acquisition	89	MCAR	100	07704
Grantsville	WV	Land Acquisition	91	MCAR	Lump Sum	07725
HUNTINGTON	WV	ARMORY, ADD/ALT	90	MCNG	546	540028
KINGWOOD	WV	OMS	91	MCNG	1,100	540031
KINGWOOD	WV	NEW USARC	90	MCAR	1,810	96
Kingwood	WV	Land Acquisition	89	MCAR	50	07680
Lew Jane/Weston	WV	Land Acquisition	91	MCAR	Lump Sum	07726
Lewisburg	WV	Land Acquisition	91	MCAR	Lump Sum	07727
Morgantown	WV	Land Acquisition	89	MCAR	210	07683
MORGANTOWN	WV	NEW USARC	90	MCAR	2,333	645
PARKERSBURG (BL	WV	OMS ADD	91	MCNG	900	540046
RAINELLE	WV	NEW USARC	90	MCAR	2,646	102
Valley Grove/Wh	WV	Land Acquisition	91	MCAR	Lump Sum	07678
Weirton	WV	Land Acquisition	91	MCAR	Lump Sum	07463
WHEELING	WV	ARMORY, 100-PERSON	90	MCNG	2,293	540030
WHEELING	WV	AVN (LIMITED) NEW AASF	90	MCNG	3,833	540029
CAMP GUERNSEY	WY	TRNG SITE, AIRFIELD IMPV PH I	91	MCNG	2,947	560044
CAMP GUERNSEY	WY	TRNG SITE, 200-PERSON BKS	91	MCNG	983	560005
CAMP GUERNSEY	WY	RANGE, MODIFIED RECORD FIRE(RETS	90	MCNG	810	560050
CHEYENNE	WY	AVN PARKING IMPROVEMENTS	90	MCNG	340	560012
CHEYENNE	WY	ARMORY, ANNEX	90	MCNG	2,351	560043
DOUGLAS	WY	ARMORY, 60-PERSON	90	MCNG	1,033	560001
LANDER	WY	OMS, SUB SHOP	91	MCNG	277	560021
VARIOUS	ZL	AAUSB ARMORY UNIT STORAGE BLDG	91	MCNG	1,600	
VARIOUS	ZL	AIRR INDOOR RANGE REHABILITATION	91	MCNG	2,200	
VARIOUS LOCATIO	ZU	ARMORY UNIT STORAGE BLDG	89	MCNG	1,700	
VARIOUS LOCATIO	ZU	ARMORY INDOOR RANGE REHAB	89	MCNG	1,800	
VARIOUS LOCATIO	ZU	ARMORY INDOOR RANGE REHAB	91	MCNG	2,200	
VARIOUS LOCATIO	ZU	ARMORY UNIT STORAGE BLDG	91	MCNG	1,600	
Classifd OS	ZZ	War Reserve Storage	90	MCA	6,100	23207
OS Loc Unsp	ZZ	Pre-Positioned War Materiel Facilities	89	MCA	4,450	19652
OS Loc Unsp	ZZ	Intermediate Staging Facility	89	MCA	11,300	23208

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1987	IL	N	043	GRANITE CITY IL RNCFSU4	DRILL SITE	390
1987	MS	S	169	MERIDIAN MS NAS	AIRFIELD PAVEMENT	3170
1987	OH	N	050	COLUMBUS OH NMCRC	OP STORAGE FACILITY	175
1988	CA	W	096	SAN DIEGO CA PWC	WASTEWATER SYS IMPVS	5700
1988	CA	W	135	SEAL BEACH CA NWS	MIS FAC ADDN/ALTERS	1970
1989	AC	L	017	ANTIGUA NSF	NAV SUPT FAC UPGRADE	6470
1989	CA	SW	010	SAN DIEGO SPASURRECSTA	LAND ACQUISITION	600
1989	HI	P	331	BARBERS PT HI NAR	ALTER B-128	211
1989	HI	P	108	PEARL HARBOR HI NSB	CONTROLLED INDUSTRIAL FAC	11250
1989	MS	S	821	PASCAGOULA MS NS	U&SI	100
1989	TN	S	255	MEMPHIS TN NAR	AIRCRAFT RINSE FACILITY	1100
1989	WA	W	109	EVERETT WA NS	CARRIER SUPT COMPLEX (INCR IV)	9650
1990	AC	L	127	ANTIGUA NSF	FAMILY HOUSING	1565
1990	AK	W	130	ANCHORAGE AK NRC	RESERVE CENTER ACQUISITION	1200
1990	AL	S	330	HUNTSVILLE AL NRC	RESERVE CENTER ACQUISITION	1052
1990	AL	S	022	MOBILE AL NS	SITE IMPROVEMNT MITIGATION	865
1990	AL	S	026	MOBILE AL NS	MESS HALL	880
1990	CA	SW	078	CORONADO CA NAVPHIBASE	OPERATIONAL STRG WAREHSE	4370
1990	CA	W	020	EL CENTRO CA NAF	BACHELOR ENLISTED QUARTERS	7200
1990	CA	SW	511	NORTH ISLAND CA NAS	PIER ELECTRIC PWR UPGRADE	6160
1990	CA	W	054	SAN BERNADINO CA NMCRC	RESERVE TRAINING BUILDILNG	5350
1990	CA	SW	003	SAN DIEGO CA FLINTRCTRPAC	INTELL TRNG BLDG ADDN	2500
1990	CA	SW	528	SAN DIEGO CA NAR	AIRCRAFT MAINT HANGAR	6700
1990	CA	SW	090	SAN DIEGO CA NAVOCNSYSCEN	PHYSICS LAB SAFETY IMPVS	1300
1990	CA	SW	600H	SAN DIEGO CA NH	REG MED CTR SUPPORT FACS	5000
1990	CA	SW	190	SAN DIEGO CA NS	ACCESS ROAD	400
1990	CA	SW	352	SAN DIEGO CA NTC	BRIDGE	4800
1990	CA	W	071	SAN FRANCISCO CA PWC	WATER SUPPLY SYSTEM IMPRVS	3550
1990	CA	W	129	SEAL BEACH CA NWS	MISSILE MAGAZINES	9000
1990	CA	W	268	VALLEJO CA MARE IS NSY	DREDGNG MTRLS HDLG FAC IMP	2700
1990	CA	W	281	VALLEJO CA MARE IS NSY	CONTROLLED INDUS BLDG ADDN	6300
1990	CT	N	176	NEW LONDON CT NAVSUBSCN	OPERATIONAL TRAINER FAC	8200
1990	CT	N	169	NEW LONDON CT NSB	BACHELOR ENLISTED QUARTERS	11900
1990	CT	N	356	NEW LONDON CT NSB	WEAPONS STORAGE IMPVS	3500
1990	CT	N	377	NEW LONDON CT NSB	BOILER PLANT MODIFICATIONS	2750
1990	FL	S	888	CECIL FIELD FL NAS	LIGHT ATTACK WEAPONS SCH	900
1990	FL	S	509A	MAYPORT FL NS	REPAIR WHARF	20000
1990	FL	S	316	PANAMA CITY FL DIVSALTRAC	DIVER TRNG BLDG ADDN	4300
1990	FL	S	347	PANAMA CITY FL NAVXDIVNGU	UNDERWTR EQUIP SPT COMPLEX	2900
1990	FL	S	109	PENSACOLA FL PWC	WASTEWATER TRANSFER SYSTEM	2100
1990	GA	S	299	ATLANTA GA NAS	AIRCRAFT WASH RACK	210
1990	GA	S	328	ATLANTA GA NAS	ALTER B-1101	400
1990	GA	S	329	ATLANTA GA NAS	OPERATIONS BUILDING	400
1990	GU	P	378	CAMP COVINGTON GUAM NCB	MESS HALL	6300
1990	GU	P	816	GUAM NAVMAG	MK-48 TORPEDO	790
1990	HI	P	116	PEARL HARBOR HI NSB	GEN PURPOSE BERTHING WHARF	18600
1990	HI	P	151	WAHIAWA HI NCAMSEPAC	COMMS CTR SECURITY IMPVS	8000

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1990	IL	N	079	DECATUR IL NRC	RESERVE CENTER ACQUISITION	1000
1990	IL	N	120	GLENVIEW IL NAS	BEW	4700
1990	IL	N	301	GREAT LAKES IL NN	BACHELOR ENLISTED QUARTERS	10470
1990	IL	N	078	SPRINGFIELD IL NMCRC	RESERVE CENTER ADDITION	1900
1990	KY	S	577	FRANKFURT KY NRC	RESERVE CENTER ADDITION	225
1990	LA	S	098	NEW ORLEANS LA NSA	SMALL BOAT BREAKWATER	170
1990	LA	S	242	NEW ORLEANS LA NSA	AIRCRAFT POWER CHECK	520
1990	LA	S	038	SHREVEPORT LA NMCRC	RESERVE TRAINING BLDG	3400
1990	MA	N	173	SO WEYMOUTH MA NAS	CONTROL TOWER FACILITY	2350
1990	MD	C	475	PATUXENT RIVER MD NATC	AIRCRFT FLIGHT SYS EQP LAB	2000
1990	ME	N	304	BRUNSWICK ME NAVCLINBR	AVIA PHYS TRNG FACILITY	2650
1990	MO	S	075	ST LOUIS MO NMCRC	RESERVE CENTER ADDITION	2200
1990	MS	S	190	GULFPORT MS CBC	ACCESS ROAD	1150
1990	MS	S	266	MERIDIAN MS NAS	AIRCRAFT MAINT FACS	11800
1990	NC	L	999	CARTERET COUNTY NC	ACCESS ROADS	5500
1990	NC	S	316	CHARLOTTE NC NMCRC	RESERVE CENTER ACQUISITION	4170
1990	NJ	N	001	BAYONNE NJ NPPSDETOFF	PRINTING PLANT	1000
1990	NJ	N	847	EARLE NJ NWS	FAMILY SERVICES CTR	570
1990	NY	N	091	NEW YORK NY NAVSTA	CHILD CARE CENTER	3000
1990	OK	S	090	TINKER AFB OK NAVAIRDET	AC SUPPORT FACS (INCR III)	21500
1990	PR	L	320N	ROOSEVELT RDS PR NCS	COMMUNICATIONS CTR ADDN	1250
1990	PR	L	190	ROOSEVELT RDS PR NS	ACCESS ROAD	1260
1990	PR	L	300N	ROOSEVELT RDS PR NS	AIR CARGO TERMINAL	1550
1990	PR	L	301N	ROOSEVELT RDS PR NS	FUEL MOORING FACILITY	10300
1990	PR	L	303N	ROOSEVELT RDS PR NS	PRINTING PLNT (ROOS RDS)	1450
1990	PR	L	304N	ROOSEVELT RDS PR NS	SUPPLY WAREHOUSES	2100
1990	PR	L	305N	ROOSEVELT RDS PR NS	DENTAL CLINIC	5200
1990	PR	L	306N	ROOSEVELT RDS PR NS	CONTROLLED HUMIDITY WHSE	1300
1990	PR	L	307N	ROOSEVELT RDS PR NS	BANK	900
1990	PR	L	311N	ROOSEVELT RDS PR NS	OPEN MESS STORAGE	1100
1990	PR	L	313N	ROOSEVELT RDS PR NS	MILITARY SUPPORT STORAGE	840
1990	PR	L	314N	ROOSEVELT RDS PR NS	CHAPEL	3100
1990	PR	L	315N	ROOSEVELT RDS PR NS	BOAT HOUSE	3450
1990	PR	L	889N	ROOSEVELT RDS PR NS	EX SERV STA/MINI-MART	2880
1990	PR	L	317N	ROOSEVELT RDS PR WPNTRFAC	RANGE OPERATIONS STORAGE	480
1990	PR	L	318N	ROOSEVELT RDS PR WPNTRFAC	RGE OPS BLDG STRG(VIEQUES)	260
1990	PR	L	319N	ROOSEVELT RDS PR WPNTRFAC	RANGE OPS CTR (ST CROIX)	6500
1990	PR	L	316N	VIEQUES WEST AMMO FAC	PUB WKS STRG (VIEQUES)	620
1990	RI	N	409	NEWPORT RI NETC	VEHICLE PARKING	290
1990	SC	S	666N	CHARLESTON SC NS	FLT OPERS CONTROL BLDG	1250
1990	SC	S	861N	CHARLESTON SC NS	MARINA	3100
1990	SC	S	937N	CHARLESTON SC NS	MILITARY SUPPORT FACS	2700
1990	SC	S	761N	CHARLESTON SC NSY	PUBLIC WORKS FACILITY	7900
1990	SC	S	932N	CHARLESTON SC NSY	INDUST LOGISTICS FAC	7800
1990	SC	S	190	CHARLESTON SC NWS	ACCESS ROAD	3000
1990	SC	S	927N	CHARLESTON SC NWS	REPAIR PIERS	2700
1990	TX	S	124	KINGSVILLE TX NAS	FAMILY HOUSING	140

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1990	TX	S	001	LACKLAND AFB TX TECHTRNG	SECURITY TRAINING CTR	4500
1990	VA	C	996	DAHLGREN VA SURWARFARECTR	CHILD CARE CENTER	1000
1990	VA	S	967	NORFOLK VA NAVCAMS LANT	UTILS SPT UPGRD (ASCEN IS)	3500
1990	VA	L	823	NORFOLK VA NSC	STAND-BY GENERATOR PLANT	300
1990	VA	L	184	OCEANA VA NAS	MED ATTACK WPNS SCHOOL	6025
1990	VI	L	046M	ST CROIX VI HAMS BLUFF	SONOBUOY QUAL ASSURANCELAB	2350
1990	WA	W	083	BREMERTON PUGETSND WA NSC	EMERGENCY GENERATORS	690
1990	WA	W	620	BREMERTON PUGETSND WA NSY	INDUST SPT COMPLEX - INC I	18900
1990	WA	W	016	BREMERTON WA NAVHOSP	BACHELOR ENLISTED QUARTERS	1000
1990	WA	W	070	OSO JIM CREEK WA NRS	STAND-BY GENERATOR PLANT	1200
1990	WI	N	111	GREENBAY WI NMCRC	LAND ACQUISITION	400
1991	AK	W	892	ADAK AK NAS	SOLID WASTE DISPOSAL FAC	4250
1991	AK	W	075	ADAK AK NSGA	OPERATIONS BLDG ADDITION	3000
1991	CA	SW	953	CAMP PENDLETON CA PHIBTSF	LCAC SUPPORT COMPLEX	8470
1991	CA	W	292	CONCORD CA NWC	LAND ACQUISITION	200
1991	CA	W	171	CORONA CA NWS SEAL BCH AX	WEAPONS TEST & EVAL FAC	8870
1991	CA	SW	006	CORONADO CA NAB	PHYSICAL REHAB FACILITY	580
1991	CA	W	888	LEMOORE CA NAS	WEAPONS SCHOOL ADDITION	900
1991	CA	SW	270	MIRAMAR CA NAS	AIRCRAFT STARTING SYSTEM	1440
1991	CA	SW	353	MIRAMAR CA NAS	FIRE FIGHTING TRAINER	700
1991	CA	SW	254	MIRAMAR CA NAS	TACT AIRC CBT TRNG FAC	1250
1991	CA	SW	293	MIRAMAR CA NAS	CHILD DEVELOPMENT CENTER	2300
1991	CA	SW	346	MIRAMAR CA NAS	TOPGUN ACADEMIC FACILITY	4040
1991	CA	SW	888	MIRAMAR CA NAS	WEAPONS SCHOOL ADDITION	1420
1991	CA	W	004	MONTEREY CA FLNUMOCEANCEN	METEOROLOGICAL BUILDING	6010
1991	CA	W	146	MONTEREY CA NPGS	PUBLIC WORKS COMPLEX	6620
1991	CA	W	161	MONTEREY CA NPGS	LECT HALL ADD&SEISMIC UPGR	2190
1991	CA	SW	573	NORTH ISLAND CA NAS	HIGH EXPLOSIVE MAGAZINES	1510
1991	CA	W	474	PORT HUENEME CA NCBC	ELECTRICAL DIST SYS IMPR	2010
1991	CA	W	012	PORT HUENEME CA NSWSES	WPN SYS INTEGRATION LAB	10150
1991	CA	SW	231	SAN DIEGO CA FASWTC PAC	BACHELOR ENLISTED QUARTERS	8950
1991	CA	SW	038	SAN DIEGO CA FCTCP	CVN-71 TRAINER	510
1991	CA	SW	550	SAN DIEGO CA NAR	AIRCRAFT PARKING APRON	3950
1991	CA	SW	095	SAN DIEGO CA NAVOCNSYSCEN	COMBINED RESEARCH LAB	11760
1991	CA	SW	191	SAN DIEGO CA NS	ACCESS ROAD	2300
1991	CA	SW	099	SAN DIEGO CA NSB	CHILD DEVELOPMENT CENTER	4130
1991	CA	SW	086	SAN DIEGO CA NSC	COLD STORAGE WAREHOUSE	8800
1991	CA	SW	191	SAN DIEGO CA NTC	BARRACKS	5630
1991	CA	SW	331	SAN DIEGO CA NTC	RECRUIT SPT CTRAND CHAPEL	5779
1991	CA	SW	347	SAN DIEGO CA NTC	SMALL ARMS RANGE	3820
1991	CA	SW	815	SAN DIEGO CA PWC	FAMILY HOUSING	7000
1991	CA	SW	149	SAN DIEGO CA PWC	STEAM DISTR SYS IMPROVE	3320
1991	CA	SW	262R	SAN DIEGO NS	PIER UPGRADE	7100
1991	CA	W	066	SAN FRANCISCO CA PWC	SEISMIC REPAIRS	950
1991	CA	SW	470	TWENTYNINE PALMS CA MAGCC	INDUST WSTWTR TRTMNT FACS	2600
1991	CT	N	398	NEW LONDON CT NAVSUBSCH	OPS TRAINER FAC	18990
1991	CT	N	130	NEW LONDON CT NSB	BACH OFF QTRS MODERN	5000

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1991	CT	N	413	NEW LONDON CT NSB	QUAYWALL REPLACEMENT	9150
1991	CT	N	424	NEW LONDON CT NSB	THAMES RIVER DREDGING	8350
1991	FL	S	070	JACKSONVILLE FL NAS	OP STORAGE FACILITY	220
1991	FL	S	174	JACKSONVILLE FL NAS	ANTI-SUB WARFARE TRNG FAC	2810
1991	FL	S	201	JACKSONVILLE FL NAS	FIRE TRAINING FAC	630
1991	FL	S	636	KEY WEST FL NAS	CARIBBEAN REG OPS CENTER	4020
1991	FL	S	168	MAYPORT FL FTC	FIRE FIGHTING TRNG FAC	4300
1991	FL	S	830	MAYPORT FL NS	POTABLE WTR SYS IMPRVS	4950
1991	FL	S	111	PENSACOLA FL PWC	WTR & SEWER PIPELINES SEP	3460
1991	GA	S	331	ATLANTA GA NAS	AVIONICS SHOP	2800
1991	GA	S	191	KINGS BAY GA NSB	ACCESS ROAD	900
1991	GA	S	364	KINGS BAY GA NSB	EXPLOSIVES HNDLG WHARF	56615
1991	GA	S	416	KINGS BAY GA NSB	TRIDENT TRAINING FAC ADDNS	2210
1991	GA	S	418	KINGS BAY GA NSB	BACHELOR ENLISTED QUARTERS	7230
1991	GA	S	420	KINGS BAY GA NSB	SMALL ORDNANCE MAGAZINE	620
1991	GA	S	905A	KINGS BAY GA NSB	COMMUNITY IMPACT ASSIST	10800
1991	GU	P	200	AGANA GUAM NAS	VQ-5 FACILITES	530
1991	GU	P	809	GUAM NAVMAG	TOMAHAWK SUPPORT COMPLEX	9319
1991	HI	P	197	BARKING SANDS HI PMRF	FIRE TRAINING FACILITY	500
1991	HI	P	001	LUALUALEI HI NAVMAG	CONSTRUCT PIER	400
1991	HI	P	117	LUALUALEI HI NM	ELECTR DIST LINES RELOC	1660
1991	HI	P	417	PEARL HARBOR HI COMOCSYS	SURTASS SUPPORT CENTER	12780
1991	HI	P	114	PEARL HARBOR HI NSB	ELEC DIST SYS IMPROVES	2010
1991	HI	P	506	PEARL HARBOR HI PWC	AUTO VEHICLE MAINT SHOP	6940
1991	HI	P	005	PEARL HARBOR HI WESTOCEAN	UNINTERRUPTIBLE POWER SUP	270
1991	IL	N	140	GLENVIEW IL NAS	AIMD BUILDING	10400
1991	IL	N	148	GLENVIEW IL NAS	RELOCATE TX/RX BUILDING	670
1991	IL	N	471	GREAT LAKES IL NTC	FIREMAN APPRENTICE TRG SCH	2170
1991	IL	N	534	GREAT LAKES IL PWC	TRANSPORTATION FAC	4500
1991	IL	N	378	GREAT LAKES IL PWC	STORM SEWER SYSTEM IMPRVS	700
1991	IL	N	538	GREAT LAKES IL PWC	ELECT DISTR SYSTEM IMPROVS	1760
1991	IL	N	077	PEORIA IL NMCRC	RESERVE CENTER ADDITION	800
1991	IL	N	076	ROCK ISLAND IL NMCRC	RESERVE CENTER ADDITION	3200
1991	IN	N	019	TERRE HAUTE IN NRC	RESERVE CENTER ADDITION	620
1991	LA	S	083	MONROE LA NRC	RES CEN ADDITION	250
1991	LA	S	382	NEW ORLEANS LA NAS	AVIONICS BUILDING	3200
1991	LA	S	420	NEW ORLEANS LA NAS	HANGAR/APRON	13100
1991	MA	N	059	SO WEYMOUTH MA NAS	FIRE STATION	780
1991	MD	C	420	PATUXENT RIVER MD NATC	SECURITY IMPROVEMENTS	3010
1991	MD	C	427	PATUXENT RIVER MD NATC	TEST PILOT SCHOOL	6030
1991	MD	C	463	PATUXENT RIVER MD NATC	NORTH GATE ROAD	2000
1991	MD	C	903	PATUXENT RIVER MD NH	AVIAT PHYSIOLOGY TRNG FAC	2510
1991	ME	N	001	BANGOR ME NRC	RESERVE TRAINING BUILDING	1815
1991	MS	S	191	MERIDIAN MS NAS	ACCESS ROAD	817
1991	MS	S	011	STENNIS SPACE CNTR MS	AIR DEFENSE RESEARCH BLDG	1000
1991	NJ	N	949	EARLE NJ NWS	TRESTLES REPL (PHASE I)	20100
1991	NV	W	196	FALLON NV NAS	FAMILY HOUSING	10500

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1991	NV	W	294	FALLON NV NAS	RANGE AIR SURVEILLANCE SYSTEM	770
1991	NV	W	300	FALLON NV NAS	SECURITY FENCES	830
1991	NV	W	301	FALLON NV NAS	FIRE FIGHT TRAIN FAC	700
1991	OH	N	554	CINCINNATI OH NMCRC	RESERVE CENTER ADDITION	1200
1991	OH	N	576	COLUMBUS OH NMCRC	VHF-CNB	350
1991	PA	N	551	HARRISBURG PA AFRC	RESERVE CENTER ADDITION	2400
1991	PA	N	213	WILLOW GROVE PA NAS	GSE SHED	1220
1991	RI	N	031	NEWPORT RI NAVUWSYSCEN	ADV UNDERWTR WPNS RES LAB	13700
1991	RI	N	146	NEWPORT RI NETC	STEAM DISTR SYSTEM UPGRADE	6230
1991	RI	N	407	NEWPORT RI NETC	CHILD DEVELOPMENT CENTER	1200
1991	RI	N	054	NEWPORT RI NUSC	HIGH ENERGY TEST FACILITY	930
1991	RI	N	055	NEWPORT RI NUSC	MK-48 NOSE ARRAY TEST FAC	800
1991	SC	S	747	CHARLESTON SC NS	PASS OFFICE ADDITION	720
1991	SC	S	784	CHARLESTON SC NWS	MISSILE MAGAZINE	1910
1991	SC	S	716	GULFPORT MS NAVCONSTRACEN	APPLIED INST BLDG	1170
1991	SC	S	723	GULFPORT MS NAVCONSTRACEN	BARRACKS	7540
1991	TX	S	208	DALLAS TX NAS	GSE SHOP	1640
1991	TX	S	319	DALLAS TX NAS	LOX/NIT FAC	650
1991	TX	S	355	DALLAS TX NAS	COMM FACILITY	400
1991	TX	S	065	HOUSTON TX NMCRC	RESERVE CENTER ADDITION	3600
1991	TX	S	002	LACKLAND AFB TX TECHTRNG	BACHELOR ENLISTED QUARTERS	11850
1991	VA	C	249	DAHLGREN VA NAVSPASURSYS	SPACE SURVEILLANCE CTR	9850
1991	VA	L	983	DAM NECK VA FCDSSACT	COMPUTER PROG OPS CTR ADDN	6500
1991	VA	L	288	LITTLE CREEK VA NAB	FAMILY HOUSING OFFICE	372
1991	VA	L	337	LITTLE CREEK VA NAVPHIBSE	LCAC COMPLEX (INCR II)	12460
1991	VA	L	418	LITTLE CREEK VA NAVPHIBSE	SURTASS SUPPORT CENTER ADN	8010
1991	VA	L	618	LITTLE CREEK VA NAVPHIBSE	SMALL ARMS RANGE	2400
1991	VA	L	360	LITTLE CREEK VA PHIBSCOL	TRAINING MATERIALS STORAGE	800
1991	VA	L	366	LITTLE CREEK VA PHIBSCOL	LCAC TRAINING FAC	1800
1991	VA	L	180	NORFOLK VA FTC	FIRE FIGHTING TRAIN FAC	16080
1991	VA	L	633	NORFOLK VA NAR	HH-1B HANGAR	7300
1991	VA	L	834	NORFOLK VA NS	ELECTRIC POWER UPGRADE	10950
1991	VA	L	236	NORFOLK VA PWC	FUEL LINE	4020
1991	VA	L	407	PORTSMOUTH VA NORFOLK NSY	WATRFRT SERVICE SUPPT BLDG	14600
1991	VA	C	327	WALLOPS ISLAND VA AEGIS	AEGIS CMD & LIFE SUPT FAC	5490
1991	VA	L	028	WILLIAMSBURG VA RESCHDSTL	HAGGLUNDS CRANE	395
1991	VI	L	037	ST CROIX VI NACA	LAND ACQUISITION	400
1991	VT	N	530	BURLINGTON VT NRC	RESERVE TRAINING BUILDING	2500
1991	WA	W	099	BANGOR WA NSB	EXPAND SUBGRU 9 OPCON	550
1991	WA	W	050	BANGOR WA TRIDENT REFITFA	HAZAR & FLAMM STOREHOUSE	2110
1991	WA	W	057	BANGOR WA TRIDENT REFITFA	CRANE TRACKAGE EXTENSION	910
1991	WA	W	800	BREMERTON PUGETSND WA NS	TECHNOLOGY DEMO SYS	640
1991	WA	W	252	BREMERTON PUGETSND WA NSY	DRY DOCK UTILITIES UPGRADE	2000
1991	WA	W	082	EVERETT WA NAVAL STATION	UTILITIES AND SITE IMPROVS	3070
1991	WA	W	089	EVERETT WA NAVAL STATION	CARRIER SUPPORT	15777
1991	WA	W	104R	EVERETT WA NAVAL STATION	LOGISTICS COMPLEX	10680
1991	WA	W	117	EVERETT WA NAVAL STATION	SECURITY & FIRE STATION	1760
1991	WA	W	145	EVERETT WA NAVAL STATION	COMMUNICATION FACILITY	1660
1991	WA	W	302R	EVERETT WA NAVAL STATION	FLEET HQ SUPPORT	6200
1991	WA	W	312R	EVERETT WA NAVAL STATION	PORT SERVICES BLDG ADDN	1900
1991	WA	W	808	SILVERDALE WA STRATWEPFAC	UTILS & SITE IMPROVEMENTS	11060

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1991	CA	W	HC-3-87	NPGS Monterey	Install vanity cabinets	267.4
1991	CA	W	HC-1-88	NPGS Monterey	Install bath exhaust fans	207
1991	CA	W	HC-1-91	NS Mare Island	Improvements to 211 Units	394
1991	CA	W	HC-1-89	PWC San Diego	Add dishwashers & cabinets	750
1991	CA	W	HC-15-88	PWC San Diego	Patio covers	465.8
1991	CA	W	HC-1-88	PWC San Francisco	Fences & garbage disposals	1615.7
1991	CA	W	HC-10-87	PWC San Francisco	Fences/carports/patios	505.8
1991	FL	S	HC-2-88	PWC Pensacola	Improve Drainage, 2 Units	10.6
1991	FL	S	HC-3-86	PWC Pensacola	Add additional bath, 2 Units	21.5
1991	IC	L	HC-2-87	NAS Keflavik	Fire hazard ceilings, 130 Unit	963.7
1991	IC	L	HC-3-87	NAS Keflavik	Fire hazard ceilings, 224 Unit	1142.3
1991	ME	N	HC-7-90	NSGA Winter Harbor	Construct access road	103.1
1991	TN	S	HC-5-85	NAS Memphis	Street widening	39.7
1991	VA	L	HC-2-87	PWC Norfolk	Install fire walls, 12 Units	64.8
1991	VA	L	HC-6-85	PWC Norfolk	Doors & window locks, 225 Unit	191.5
1991	VA	L	HC-6-87	PWC Norfolk	Landscaping, 114 Units	54
1991	VA	L	HC-8-85	PWC Norfolk	Doors & window locks, 257 Unit	188.9
1991	VA	L	HC-4-87	PWC Norfolk	Landscaping, 809 Units	431.3
					TOTAL	7417.1

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1989	CA	SW	236	TWENTYNINE PALMS CA MAGCC	CHILD DEVELOPMENT CENTER	1900
1989	NC	L	372	CHERRY POINT NC MCAS	BEQ	16710
1990	AZ	W	438	YUMA AZ MCAS	AIRCRFT POWER CHECK FACS	900
1990	CA	SW	537	CAMP PENDLETON CA MCAS	FLIGHT LINE SEC IMPROVES	2100
1990	CA	SW	115	CAMP PENDLETON CA MCB	FAMILY HOUSING	12000
1990	CA	SW	070	CAMP PENDLETON CA MCB	FAMILY HOUSING	10150
1990	CA	SW	349	CAMP PENDLETON CA MCB	OPERATIONS SUPPORT FACS	3220
1990	CA	SW	997	CAMP PENDLETON CA MCB	TACT SYS TEST & SPT CTR	5000
1990	CA	SW	620	CAMP PENDLETON CA MCB	TACT COMPONENTS STRG FAC	850
1990	CA	SW	903	CAMP PENDLETON CA MCB	BACHELOR ENLISTED QUARTERS	24500
1990	CA	W	063	EL TORO CA MCAS	COMMUNITY CENTER	1460
1990	CA	W	125	EL TORO CA MCAS	FAMILY HOUSING	25000
	CA	W	115	EL TORO CA MCAS	FAMILY HOUSING	15000
	CA	W	123	EL TORO CA MCAS	FAMILY HOUSING	8000
1990	CA	W	500	EL TORO CA MCAS	OPERATIONAL TRAINER	950
1990	CA	W	461	TWENTYNINE PALMS CA MAGCC	ELEC COMMS MAINT SHOP	1550
1990	LA	S	999	NEW ORLEANS LA NSA	COMPUTER FACILITY	305
1990	MI	N	039	DETROIT MI NAF	RESERVE CENTER REHAB	1000
1990	MO	N	001	KANSAS CITY MO MARFINCEN	FIN & DATA PROC CTR-INCR 1	10000
1990	NC	L	644	CAMP LEJEUNE NC MCB	ELEC COMM MAINT SHOP	7200
1990	NC	L	663	CAMP LEJEUNE NC MCB	MESS HALL	5410
1990	NC	L	801	CHERRY POINT NC MCAS	APPLIED INSTR FACILITIES	5350
1990	NC	L	520	NEW RIVER NC MCAS	OPERATIONAL TRNR FAC	7400
1990	NC	L	496	NEW RIVER NC MCAS	FLIGHT LINE SECURITY IMPRS	2300
1990	NC	L	543	NEW RIVER NC MCAS	MAINT HANGAR ADDITIONS	5200
1990	NC	L	525	NEW RIVER NC MCAS	AVIATION MAINT TRNG BLDG	6000
1990	NY	N	522	STEWART AFB NY AFRC	BEQ	3800
1990	NY	N	500	STEWART AFB NY AFRC	FUEL SYS MAINT FAC	5700
1990	NY	N	521	STEWART AFB NY AFRC	SUPPLY SUPPORT FAC	1920
1990	PA	N	505	READING PA MCRC	HOWITZER SHED	330
1990	SC	S	375	BEAUFORT SC MCAS	AVIATION ARMAMENT SHOP	3950
1991	AZ	W	441	YUMA AZ MCAS	AVIATION SUPPLY WAREHOUSE	3720
1991	CA	W	809	BARSTOW CA MCLB	DYNAMOMETER	690
1991	CA	SW	523	CAMP PENDLETON CA MCAS	MAINTENANCE HANGAR	8100
1991	CA	SW	584	CAMP PENDLETON CA MCAS	CONSTR & WT HNDLG EQP SHOP	4110
1991	CA	SW	890	CAMP PENDLETON CA MCB	FAMILY HOUSING	11805
1991	CA	SW	996	CAMP PENDLETON CA MCB	MIL OPS IN URBANIZED TERRN	10860
1991	CA	SW	229	CAMP PENDLETON CA MCB	ELECS COMMS MAINT SHOP	5330
1991	CA	SW	977	CAMP PENDLETON CA MCB	MESS HALL	3720
1991	CA	W	381	EL TORO CA MCAS	DATA PROCESS CNTR	3970
1991	CA	W	341	EL TORO CA MCAS	HAZ & FLAMMABLE STRHSES	3010
1991	CA	SW	447	TWENTYNINE PALMS CA MAGCC	POTABLE WATER STORAGE TANK	4600
1991	CA	SW	429	TWENTYNINE PALMS CA MAGCC	FIELD MAINTENANCE SHOP	3620
1991	FL	S	118	PARRIS ISLAND SC MCRD	CLOTHING ISSUE BUILDING	3410

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1991	HI	P	541	KANEOHE BAY HI MCAS	AIRCRAFT RINSE FACILITY	1650
1991	NC	L	810	CAMP LEJEUNE NC MCB	MECHANICS TRG BLDG-INCR III	4050
1991	NC	L	579	CAMP LEJEUNE NC MCB	ELECS COMMS MAINT SHOPS	4120
1991	NC	L	062	CHERRY POINT NC MCAS	AV8B NIGHT ATTACK WEAPON TRAIN	950
1991	NC	L	860	CHERRY POINT NC MCAS	REGIMENTAL GROUP HEADQTRS	1950
1991	NC	L	017	CHERRY POINT NC MCAS	WATER TREATMENT FACILITY	12000
1991	SC	S	366	BEAUFORT SC MCAS	BACHELOR ENLISTED QUARTERS	6700

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1990	NC	L	808	CAMP LEJEUNE NC MCB	PARKING FAC	347
1991	CA	SW	864	CAMP PENDLETON CA MCB	EXTERIOR IMPROVEMENTS	962
1991	GA	S	705	ALBANY GA MCLB	INSTALL INSULATION	221
1991	MO	N	302	KANSAS CITY MO MCFC	INSTALL SIDEWALKS	190
1991	NC	L	003	CAMP LEJEUNE NC MCB	MOBILE HOME SPACES	730
1991	AZ	W	001	YUMA AZ MCAS	INSTALL IRRIGATION SYS	144
1991	CA	W	078	EL TORO CA MCAS	INSTALL FENCES	193
1991	CA	W	373	EL TORO CA MCAS	INSTALL PATIO COVERS	344

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1990	DC	C	299	WASHINGTON DC COMNAVDIST	STEAM PLANT SYSTEM MODERN	420
1990	DC	C	025	WASHINGTON DC NAVOBSY	LABORATORY EXPANSION	2500
1990	MD	C	034	INDIAN HD MD NAVEODTECHCT	ORD COUNTERMEASURES LAB	7700
1990	MD	C	059	INDIAN HEAD MD NOS	MIX, CAST, CURE FAC	10670
1991	DC	C	131	WASHINGTON DC NRL	PAYLOAD FACILITY VAULT	978
1991	DC	C	115	WASHINGTON DC NRL	ELECTRO-OPTICS RESRCH LAB	9850
1991	MD	C	912	BETHESDA MD NATNAVMEDCEN	BACHELOR ENLISTED QUARTERS	9040
1991	MD	C	068	INDIAN HEAD MD NOS	CHEM/TOXICOLOGY LAB REPL	6000
1991	MD	C	001A	SUITLAND MD NAVINTCOM HQ	HEADQUARTERS BLDG-INCR II	55048
1991	VA	C	053	FORT BELVOIR RNMCB 23	OP STORAGE FACILITY	175
1991	VA	C	148	QUANTICO VA NRL ANNEX	MIDWAY RESEARCH CTR UPGRDE	2600
1990	CA	W	369	CHINA LAKE CA NWC	MSL ENGAGEMENT SIM ARENA	17500
1990	CT	N	105	NEW LONDON CT NUSC	ELECTROMAG SYSTEMS LAB	12600
1990	FL	S	361	PANAMA CITY FL NCSC	DEEP SUBMERGENCE LIFE SUPPORT	990
1990	IN	N	217	CRANE IN NAVWPNSUPPCEN	BATTERY TEST FACILITY	4000
1990	WA	W	752	KEYPORT WA UNSEAWARENGSTA	BEQ MODERNIZATION	1850
1990	WA	W	292	KEYPORT WA UNSEAWARENGSTA	UNSEAWARENG CTR	10400
1991	CA	W	475	CHINA LAKE CA NWC	WEAPONS TACTICAL TRAINER	990
1991	CA	W	431	CHINA LAKE CA NWC	ADVANCED WEAPONS LAB	17585
1991	CA	W	063	POINT MUGU CA PMTC	SECURTY IMPROVEMENTS	2070
1991	FL	S	301	PANAMA CITY FL NCSC	COMP/ANALYSIS LAB ADDN	6330
1991	IN	N	224	CRANE IN NAVWPNSUPPCEN	ELECS COMMS MAINT SHOP	7700
1991	IN	N	225	CRANE IN NAVWPNSUPPCEN	TEST & EVALUATION FAC	1650
1991	IN	N	244	CRANE IN NAVWPNSUPPCEN	MECHANIZED MTRLS MGMT FAC	4170
1991	KY	L	215	LOUISVILLE KY NOS	PHALANX SHOP MODERNIZATION	5660
1991	PA	N	163	WARMINSTER PA NADC	A/C TECHNOLOGIES LAB	10770
1991	WA	W	295	KEYPORT WA UNSEAWARENGSTA	AUTOMATED MATRLS HDLG FAC	7340
1991	WA	W	309	KEYPORT WA UNSEAWARENGSTA	FIRE STATION	1100
1991	WA	W	337	KEYPORT WA UNSEAWARENGSTA	SUB WPNS SYSTEMS SHOP	10150

Navy

$	FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
	1989	CA	W	054	LONG BEACH CA NS	FAMILY HOUSING	26110
	1989	WA	W	032	WHIDBEY IS WA NAS	A/C INTER MAINT FAC	8370
	1990	CA	W	989	MOFFETT FLD CA NAS	CHILD CARE CENTER	1000
	1990	FL	S	482	ORLANDO FL NTC	ELECTRONIC TECHNICIAN SCH	16190
	1990	MD	C	719	ST INIGOES MD NAVELEXSYS	UTILITIES IMPVS (INCR II)	2950
	1990	PA	N	578	PHILADELPHIA PA NSY	HAZ & FLAMM STOREHOUSE	10000
	1991	CA	SW	614	LONG BEACH CA NS	FAMILY HOUSING	25018
	1991	CA	W	201	LONG BEACH CA NS	WHARF UTILITIES UPGRADE	3520
	1991	CA	W	075	SKAGGS ISLAND CA NSGA	WATER TORAGE TANK	850
	1991	FL	S	205	ORLANDO FL NTC	REPLACE CHAPEL	2100
	1991	FL	S	200	ORLANDO FL NTC	BARRACKS	10960
	1991	MD	C	723	ST INIGOES MD NAVELEXSYS	FACSFAC ELEC SYS INTEG	4020
	1991	WA	W	007	OAK HARBOR WA NAVHOSP	AVIAT PHYSIOLOGY TRG FAC	2180
	1991	WA	W	030	WHIDBEY ISLAND WA NF	ELECTRIC PWR IMPROVES	1750

1988	IT	L	100	LA MADDALENA IT NSO	COLD IRON UTIL SUPPORT	7480
1991	CR	L	722	SOUDA BAY CRETE NSA	DINING FACILITY EXPANSION	550
1991	IT	L	305	SICILY IT NAVCOMMSTA	RECEIVER FACILITY	1513
1991	IT	L	218	SIGONELLA ITALY NAS	CORROSION CTRL HANGAR	8390
1991	JP	P	2-87	KAMISEYA JAPAN NCS	CONSTRUCT CARPORTS, 70 UNITS	606.9
1991	JP	P	2-89	SASEBO JAPAN CFA	MATERIAL FOR FIP, 230 UNITS	936
1991	JP	P	7-90	YOKOSUKA JAPAN PWC	INSTALL CHILLER UNIT, 19 UNITS	206
1991	SC	L	069	EDZELL SCOTLAND NSGA	CLASSIC OWL	935
1991	SP	L	556	ROTA SPAIN NCS	OPS BUILDING ADDITION	1105
1991	SP	L	539	ROTA SPAIN NS	WATER BLADDER	881
1991	UK	L	102	LONDON UK CINCUSNAVEUR	UGRADE CINCUSNAVEUR HVAC	930

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1989	NC	L	032	CHERRY POINT NC MCAS	FORWARD TRNG AREA	8200
1990	NY	N	505	GARDEN CITY NY MCRC	CVMF	400
1990	VA	C	375	QUANTICO VA MCCOMBDEV CMD	CDN OFFICERS SCHOOL ADDN	3450
1991	VA	C	006	ARLINGTON VA HQMC	LOGISTICS SUPPORT FAC	2810
1991	VA	C	402	QUANTICO VA MCCOMBDEV CMD	COMBAT DEVELOPMENT CENTER	16006
1991	VA	C	408	QUANTICO VA MCCOMBDEV CMD	MIL OPS IN URBANIZED TERRN	3870
1991	VA	C	438	QUANTICO VA MCCOMBDEV CMD	MARINECORPS ACAD RESCH LIB	14150
1988	NC	L	029	CHERRY POINT NC MCAS	LAND ACQUISITION	2200
1989	SC	S	080	BEAUFORT SC MCAS	LAND ACQUISITION	2150
1989	NC	L	029A	CHERRY POINT NC MCAS	LAND ACQUISITION	2150

Navy

FY	ST	EFD	PN	ACTIVITY	DESCRIPTION	COST
1987	NV	W	277	FALLON NV NAS	LAND ACQUISITION	6400
1988	NY	N	085	NEW YORK NY NS	LAND ACQUISITION	5700
1989	TX	S	089	CORPUS CHRISTI TX NAS	LAND ACQUISITION	4765
1990	NY	N	093	NEW YORK NY NS	LAND ACQUISITION	3000
1990	VA	L	343	LITTLE CREEK VA NAVPHIBASE	LAND ACQUISITION	1300
1991	WA	W	276	BREMERTON PUGETSND WA NSY	LAND ACQUISITION	20000
1991	WA	W	300R	EVERETT WA NAVAL STATION	LAND ACQUISITION	11200

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
91	Holloman	NM	F-117 Operations Complex	7,200
91	Holloman	NM	F-117 Supply Complex	2,200
91	Holloman	NM	F-117 Maint Docks/Hqrs	63,000
90	Lowry	CO	Computer Operations Center	15,500
90	Lowry	CO	Logistics Support Facility	3,550
90	Balikisir	TU	Dormitory	3,600
89	Ramstein	GE	Classified Project	4,400
91	Mildenhall	UK	Add to Fire Station (P-341)	450
91	Ramstein	GE	Building 201 SCIF (P-341)	334
91	Ramstein	GE	Water Purification (P-341)	965
90	Andrews	MD	Vehicle Maintenance/Operations	4,200
90	Andrews	MD	Precision Measurement Equip Lab	1,350
91	Andrews	MD	ADAL Combat Arms Trng Fac	1,300
91	Ft Meade	MD	Defense Courier Station	1,800
91	Incirlik	TU	Water Distribution Mains	1,100
90	Kunsan	KO	Alter Munitions Storage Facs	3,200
90	Osan	KO	Aircraft Maint Unit Fac	3,450
91	Pirinclik	TU	Dormitory	1,250
89	Ramstein	GE	Uninterrupt Backup Power Supt	1,300

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
91	Beale	CA	Hazardous Mat/Waste Storage	790
91	Dyess	TX	Aircraft Corrosion Control	4,100
91	Eielson	AK	Upgrade Sewage Treatment Plant	12,400
91	Ellsworth	SD	Hydrant Refuel System	9,900
90	Hickam	HI	Fire Protection Intel Facility	530
91	Hickam	HI	Fire Protection Maint Hangar	2,250
90	Hurlburt	FL	SOF-Expand Sewage Treatment	2,000
90	King Salmon	AK	Fire Protection	2,000
91	Lackland	TX	Upgrade Sewage Sys	5,000
90	Newark	OH	Upgrade Fire Protection	2,350
91	Seymour-John	NC	Fire Protection System	850
91	Shaw	SC	Upgr Sewage Treatment Plant	3,000
91	Shemya	AK	Upgr Sewage Treatment Plant	2,700
91	Whiteman	MO	Fire Protection	750
91	Edwards	CA	Test & Eval Support Fac (P-341)	332
91	Eielson	AK	Add Aircraft Org Maint (P-341)	954
91	Eielson	AK	Convert Fuels Maint Fac (P-341)	832
91	Eielson	AK	Convert Hgr Periodic Main(P-341)	771
91	Grand Forks	SD	Refuel Veh Readiness Fac (P-341)	884
91	Sheppard	TX	PMEL Facility (P-341)	973
91	Tyndall	FL	ROCC/SOCC (P-341)	900
91	USAF Academy	CO	Repair Dining Hall (P-341)	1,000
91	Wright-Pat	OH	Chidlaw Road Relocation (P-341)	921

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
88	Whiteman	MO	B-2 Corrosion Control	5,300
88	Whiteman	MO	B-2 Fuel Cell Maint Fac	5,000
90	Whiteman	MO	B-2 Maint Control Complex	4,000
90	Whiteman	MO	B-2 Control Tower	2,900
90	Whiteman	MO	B-2 Area Security Improvements	3,500
90	Whiteman	MO	B-2 Mission Ops Ctr	5,000
90	Whiteman	MO	B-2 TLF	3,200
90	Whiteman	MO	B-2 Transient Dorm	6,200
90	Whiteman	MO	B-2 ADAL Utilities	7,900
90	Whiteman	MO	B-2 Apron/Taxiway Upgr	7,500
90	Whiteman	MO	B-2 Hydrant Fuel/Acrft Sup Sys	13,900
90	Whiteman	MO	B-2 Defense Access Roads	3,000
91	Whiteman	MO	B-2 Aircraft Maint Docks	8,700
91	Whiteman	MO	B-2 Munitions Convoy Roads	4,500
91	Whiteman	MO	B-2 Apron/Taxiway Upgr Ph 3	7,300
91	Whiteman	MO	B-2 Hydrant Fuel/Utility Sys	8,600
91	Whiteman	MO	B-2 Munitions Storage Igloos	3,600
91	Whiteman	MO	B-2 WSA Security Fencing	5,900
91	Whiteman	MO	B-2 ADAL Child Development Ctr	750
91	Whiteman	MO	B-2 ADAL Utilities	9,000
91	Whiteman	MO	B-2 Avionics Shop	5,000
91	Whiteman	MO	B-2 Defense Access Roads	5,200
91	Altus	OK	C-17 Field Training Facility	4,800
90	Charleston	SC	C-17 Assault Strip	2,750
90	Charleston	SC	C-17 ADAL Engine I&R Shop	840
91	Charleston	SC	C-17 Aircraft Maint Fac	7,900
90	Hurlburt	FL	SOF-BCE Complex	4,600
90	Hurlburt	FL	SOF-Add to Intel Fac	660
90	Hurlburt	FL	SOF-Dining Fac	2,300
90	Malmstrom	MT	KC-135R Rebasing-Pubs Dist	650
90	Malmstrom	MT	KC-135R Rebasing-Personnel Supt	1,200
90	Malmstrom	MT	KC-135R Rebasing-Three Bay Main	15,400
90	Malmstrom	MT	KC-135R Rebasing-Apron Lighting	240
90	Malmstrom	MT	KC-135R Rebasing-Supt Equip Stor	1,300
90	Malmstrom	MT	KC-135R Rebasing-ADAL Alert Fac	1,300
90	Malmstrom	MT	KC-135R Rebasing-Jet Fuel Stor	5,700

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
91	Altus	OK	Alter Flight Simulator	800
89	Cannon	NM	F-111 Avionics	1,300
91	Columbus	MS	Alter Flight Simulator	400
91	Falcon	CO	MILSTAR Ground Terminal	710
91	Hill	UT	Ordnance Storage Facility	3,250
91	Hill	UT	Stage Storage Facility	3,250
89	Langley	VA	Tactical Aircraft Control Fac	2,250
91	Laughlin	TX	Alter Flight Simulator	400
91	Laughlin	TX	Specialized UPT Maintenance	970
90	Nellis	NV	LANTIRN Avionics Fac	550
91	Peterson	CO	MILSTAR Comm Ground Terminal	1,350
91	Randolph	TX	Spec UPT Maint Supt	1,750
90	Reese	TX	Spec UPT Maint Support Fac	3,400
91	Reese	TX	Spec UPT Maint Hgr	4,100
89	Robins	GA	Classified Project	7,600
90	Tinker	OK	B1-B Rader Software Test Fac	2,000
91	Vance	OK	Alt Flight Simulator Fac	400
91	Ellsworth	SD	Upgrade Electrical Dist Sys	13,150
91	Fairchild	WA	ADAL Parking Apron	1,600
89	Griffiss	NY	ADAL Electrical Distribution	10,400
90	Griffiss	NY	Hydrant Refueling System	7,400
90	Lackland	TX	Upgrade Electrical Dist Sys	3,800
90	Lackland	TX	Add to Water Storage & Dist	3,200
90	Laughlin	TX	Water Storage	1,600
90	McClellan	CA	Upgrade Electrical Dist Sys	9,500
91	Seymour-John	NC	Repair Taxiway 3	1,052
90	Shemya	AK	Upgrade POL	3,800
90	Shemya	AK	Upgrade Water System Ph II	1,500
91	Thule	GL	Upgrade Airfield Pavements	6,300
91	Tinker	OK	Upgr Elect Distr System	3,500
90	Vandenberg	CA	Emergency Elec Backup Power	5,400

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
91	Antigua	AS	Instrumentation Facility	8,200
91	Barksdale	LA	Alter Explosive Cargo Pad	1,600
91	Barksdale	LA	Munitions Support Fac	630
90	Beale	CA	U-2R Weather Shelter	3,522
90	Beale	CA	Alert Crew Facility	3,100
90	Beale	CA	Upgrade Alert Complex	1,250
91	Brooks	TX	BCE Complex	4,100
91	Cape Canav	FL	Chemical Test Lab	2,400
91	Charleston	SC	Parachute Drying Tower	500
91	Charleston	SC	Command Post/Base Ops	2,250
90	Columbus	MS	Base Flight Ops	1,200
90	Davis-Month	AZ	Aircraft Maintenance Fac	2,200
90	Davis-Month	AZ	Traffic Management Complex	4,000
90	Davis-Month	AZ	A-10 ADAL Aircraft Engine Shop	2,000
90	Dover	DE	Add to Apron	4,100
90	Dover	DE	Operations Command Post	4,200
88	Dyess	TX	B-1B Load Crew Training	1,300
91	Dyess	TX	Runway Approach Lighting	1,050
91	Dyess	TX	ADAL Vehicle Readiness Fac	2,400
90	Edwards	CA	Flight Test Engr & Test Fac	12,400
91	Edwards	CA	Jet Engine Maintenance Fac	11,600

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
90	Eglin	FL	Add to Computer Services Ctr	9,900
90	Eglin	FL	Control Tower	2,200
91	Eglin	FL	Missile Maintenance Fac	1,900
91	Eglin	FL	Aircraft Parts Warehouse	2,800
90	Eielson	AK	ADAL Vehicle Maintenance	11,000
90	Eielson	AK	Supply Complex	10,000
90	Elmendorf	AK	Combat Arms Training	2,400
90	Fairchild	WA	Temporary Lodging Fac	1,500
90	Fairchild	WA	Command Post	2,700
91	Fairchild	WA	Alter Aircraft Maintenance	9,600
90	Goodfellow	TX	Precision Imagery	2,150
90	Goodfellow	TX	Fire Station	1,150
91	Goodfellow	TX	Security Police Ops	980
91	Grand Forks	SD	ADAL Trans Fac	4,150
91	Grand Forks	SD	Refuel Vehicle Readiness Fac	884
91	Griffiss	NY	ADAL Missile Assembly Bldg	2,300
91	Griffiss	NY	SAC Rebasing - Munitions Fac	2,200
90	Gunter	AL	BCE/Vehicle Maint Facility	4,800
91	Gunter	AL	Student Dorm	8,800
91	Gunter	AL	ADAL Senior NCO Academy	8,200
91	Gunter	AL	Student Dorm	3,100
90	Hanscom	MA	Alt Geophysics Lab	5,800
91	Hickam	HI	POL Ops Facility	1,000
91	Hickam	HI	Vehicle Ops & Maint	1,300

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
90	Hill	UT	Explosives Ord Disposal Fac	2,150
90	Hill	UT	Consolidated Telecom Fac	7,300
90	Hill	UT	Procurement Fac Consolidation	3,700
90	Holloman	NM	ADAL Comm Maint	7,700
91	Holloman	NM	Security Improvements	310
90	Homestead	FL	Add to Transient Dorm	1,950
91	Homestead	FL	Jet Fuel Stor	2,400
91	Indian Spr	NV	Munitions Loading Revetment	2,550
90	Kelly	TX	Gas Turbine Engine Fac	14,000
90	Kelly	TX	ADAL Logistics Sys Operations	3,200
91	Kelly	TX	AF Service and News Info Ctr	4,000
90	King Salmon	AK	Expand Parking Apron	6,000
90	Kirtland	NM	SOF-Alter Maint Hangar	1,850
91	Kirtland	NM	ADAL Helicopter Training Area	2,650
91	K I Sawyer	MI	Control Tower	2,700
90	Lackland	TX	Security Police Training Fac	4,500
90	Lackland	TX	Logistics Complex	8,000
91	Lackland	TX	Dining Facility	4,000
91	Lackland	TX	Fire Station	1,350
90	Lackland Anx	TX	ADAL Ops Fac	1,994
90	Langley	VA	Base Education Center	3,300
90	Laughlin	TX	BCE Complex	3,750
91	Laughlin	TX	Troop Subsistance Warehouse	450

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
90	Luke	AZ	Munitions Storage Igloos	770
90	Maxwell	AL	ADAL Consolidated Support Ctr	700
91	Maxwell	AL	JAG Academic Fac	7,700
91	Maxwell	AL	Comm Group Complex	5,300
91	Maxwell	AL	Student Dorm	5,000
91	Maxwell	AL	ADAL SP Ops Fac	1,750
91	McChord	WA	Squadron Ops Fac	5,200
90	McClellan	CA	Vehicle Maintenance Fac	5,000
90	McClellan	CA	Depot Hydraulic Fac	7,400
89	McConnell	KA	Transient Officer's Qtrs	2,200
89	McGuire	NJ	SP Complex	2,300
91	McGuire	NJ	Add to Flight Simulator	3,000
90	Nellis	NV	Parallel Taxiway 3	4,250
90	Nellis	NV	Base Security Fencing	270
89	Palmdale	CA	Defense Access Roads	5,600
90	Patrick	FL	Dining Facility	3,800
89	Peterson	CO	Fire Training Fac	2,200
91	Peterson	CO	ADAL Dorm Ph I	2,700
91	Plattsburgh	NY	Cold Stor Fac	1,200
89	Randolph	TX	Admin Fac for AFMEA	2,400
89	Randolph	TX	Alter Tech Training Mgmt Fac	1,750
90	Reese	TX	Petroleum Ops Fac	830
91	Reese	TX	Traffic Mgmt Fac	990
90	Robins	GA	Upgr Air Conditioning Labs	720
90	Robins	GA	Logistics Complex	9,300

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
90	Scott	IL	Dormitory	8,400
90	Seymour-John	NC	Supply Warehouse	950
90	Seymour-John	NC	ADAL Fuel System Maint Dock	2,200
90	Seymour-John	NC	ADAL Conv Munitions Maint	1,350
91	Seymour-John	NC	Forms & Publications Warehouse	600
90	Shemya	AK	Cons Comm Fac	4,550
90	Shemya	AK	Cold Stor & Subs Warehouse	8,100
90	Shemya	AK	POL Ops Fac	4,750
91	Shemya	AK	Add to and Upgrade BCE Fac	6,300
91	Sierra Army	CA	Student Dorm	3,650
90	Tinker	OK	AWACS Supply Warehouse	3,450
90	Tinker	OK	ADAL Depot Material Proc Fac	7,000
91	Tinker	OK	Logistics Systems Ops Fac	13,200
91	Tinker	OK	Land Acquisition	1,850
91	Tinker	OK	Systems Engr Fac	650
90	Travis	CA	ALT Support Fac Ph I	9,000
91	Travis	CA	ALT Support Fac Ph II	5,800
91	Travis	CA	Dining Hall	5,000
90	Tyndall	FL	Combat Support Trng Comp Ph II	5,800
90	Tyndall	FL	F-15 Tactical Trng Facility	1,500
90	Vandenberg	CA	Vehicle Maint Complex	6,100
90	Wright-Pat	OH	Defense Courier Station	610
90	Wright-Pat	OH	ADAL Optical Systems Lab	3,700
91	Wright-Pat	OH	AFIT Prof & Tech Ed Ctr	5,500

Air Force

YR	BASE	STATE	TITLE	PROGRAM AMOUNT ($000)
90	Altus	OK	Communities Activities Center	2,000
90	Altus	OK	Physical Fitness Center	3,200
90	Clear	AK	Alter Dormitory Phase I	5,000
91	Columbus	MS	Alter Dormitories	2,700
90	Ellsworth	SD	Add to Physical Fitness Fac	4,100
90	Grand Forks	SD	Child Care Facility	1,900
91	Hickam	HI	Add to Child Care Ctr	770
90	Hill	UT	Child Development Center	1,300
91	Holloman	NM	Alter Dormitory	2,700
90	Homestead	FL	Alt Dorm	5,400
91	Homestead	FL	Alt Dorm	5,500
90	Kelly	TX	Child Development Center	730
90	Kirtland	NM	Alter Dormitory	5,000
91	Kirtland	NM	Alter Dormitories	1,550
90	K I Sawyer	MI	Add to Physical Fitness Fac	4,300
90	Luke	AZ	Dormitory	3,200
90	Maxwell	AL	VOQ	820
91	Maxwell	AL	Alt SOS Dorms	2,750
90	McClellan	CA	Child Development Center	1,200
90	McClellan	CA	ADAL Child Development Center	630
91	Minot	ND	Child Development Center	3,600
91	Offutt	NE	Alter Physical Fitness Fac	2,600
91	Peterson	CO	ADAL Physical Fitness Ctr	3,800
90	Plattsburgh	NY	Alt Dormitories	8,900
90	Robins	GA	Child Development Center	1,100
90	Shaw	SC	Alt Dorms	5,700
90	Tyndall	FL	ADAL Child Development Ctr	1,200
90	Vandenberg	CA	Child Development Center	2,050
91	Wright-Pat	OH	Child Development Center	1,900
90	Tinker	OK	B-2 Integration Support Facility	17,000
90	Tinker	OK	B-2 Secure Storage Facility	5,200
90	Tinker	OK	B-2 Avionics Fac/Land Acquisition	9,600

Senator Dixon. Mr. McMillan, last year Congress carefully addressed the issue of the local economic impact of reductions in defense production and base closures. In responding to concerns of community economic conversion and recovery, we included provisions in the National Defense Authorization Act to enhance the community and interagency planning and notification process, increased resources for the Office of Economic Adjustment, and earmarked $200 million from DOD resources to expand Department of Labor and Department of Commerce programs.

How far along is the DOD in implementing the various elements of last year's legislation on this issue?

When will we see full implementation of the interagency planning process and the community notification procedures?

When will communities which have been adversely impacted be able to tap into the funds earmarked for the Departments of Labor and Commerce assistance programs?

Mr. McMillan. DOD has made considerable progress in implementing the Economic Adjustment, Diversification, Conversion, and Stabilization Act. Specifically, the Secretary of Defense has directed the transfer of $150 million to the Department of Labor and $50 million to the Department of Commerce to help workers and communities impacted by reductions in Defense programs, projects, and activities. Procedures to handle these transfers are nearing completion. Second, we have procedures in place to identify the effects of base closures, realignments, and major contract terminations or cancellations. A DOD working group has been established to evaluate existing notification systems and develop recommendations as to how the

Department can most appropriately satisfy the notification provisions of the act. Lastly, Executive Order 12049 which established the Economic Adjustment Committee (EAC) is being revised to reflect new legislation and the requirement that the EAC Chairmanship rotate annually among the Departments of Defense, Labor, and Commerce.

Procedures are nearly in place that will allow adversely impacted communities to tap into the funds appropriated to DOD for worker and community adjustment assistance. Communities will be able to access these funds in the same manner that they have been applying for and receiving grants for defense related worker and community adjustment assistance from funds appropriated to the Departments of Labor and Commerce.

To date, the existing resources of the Departments of Defense, Labor, and Commerce have been able to accommodate the workers and communities impacted by changes in Defense programs. For example, all requests for funds to help laid-off Defense workers have been approved by the Department of Labor. If a community needs some of the DOD funds provided to Labor or Commerce, the funds will be made available once the request is determined as an eligible and acceptable proposal.

DEFENSE BUSINESS OPERATIONS FUND

Senator DIXON. Mr. McMillan, your testimony regarding implementation of the Defense Base Operating Fund highlights the fact that the Department is requesting authorization of $420 billion in fiscal year 1992, and $74 million in fiscal year 1993 for construction projects supporting industrially funded activities. I gather that these projects represent seed money until increased user fees can fund capital facility improvements for these functions. What approval mechanism do you foresee in fiscal year 1994 and subsequent years once these industrial funds can support facility capitalization? Would the Congress have any oversight? Do you anticipate additional DBOF funded construction in fiscal year 1993 beyond the $74 million in seed money projects?

Mr. MCMILLAN. The request for fiscal years 1992 and 1993 is not "seed money" in the sense that the Department intends to fund military construction or other investments through means other than an industrial fund-type rate structure. This request is the amount that should be appropriated to customer accounts (primarily the Services' Operations and Maintenance) to pay for investment costs incurred by DBOF business areas.

Rates will be based on depreciation of capital investments from fiscal year 1993 and thereafter. In fiscal year 1992, the total cost of the investment program is included in the rate structure in order to build a reserve sufficient to fund required investments.

The authorization process for military construction projects financed through the DBOF will remain unchanged. For fiscal year 1992 and subsequent years, all DBOF costs, including capital projects which could otherwise be included in the Military Construction bill, have been included in the prices charged to the customer. Congressional oversight and control remains essentially the same as in fiscal year 1991 and prior years because funding for major construction projects included in the DBOF capital budget must be specifically authorized in the Military Construction Authorization Act before work can begin.

The appropriation process will change as the services will request appropriated funds to buy required support services from the DBOF. Appropriation requests will be based on the total cost of support provided by the DBOF, including construction projects that would otherwise have been included in the Military Construction bill. However, the Department has proposed amendments to the Military Construction Appropriations Act that would make military construction projects to be executed in the DBOF subject to authorization and provide a limit on funding available for military construction projects in the DBOF.

Senator DIXON. Yesterday, during our discussion of DBOF, it was asserted that the industrial funding approach will lead to better facilities than the present approach of direct authorization and appropriation. If this is the case, do you believe that in the long term, the facility modernization programs of functions not lending themselves to industrial funding will suffer compared to DBOF funded functions?

Mr. MCMILLAN. The problem faced by support activities, such as those included in the DBOF, is that they have had a difficult time competing with combat activities for investment funding. The result of the budget process has been to underfund the support establishment's investment needs resulting in a DOD support infrastructure that is in need of repairs and modernization. Some organizations left outside the DBOF are under study for inclusion, and these organizations may continue to experience the same problem described above. However, most of the activities not included in the DBOF are those that have benefited from the present approach to funding investments.

HOMEOWNERS ASSISTANCE PROGRAM

Senator **Dixon**. Mr. McMillan, during consideration of last year's authorization bill and again this year, the Department has requested expansion of the eligibility for the Homeowners Assistance Program. This year you propose expanding it to encompass military and civilian personnel who have been transferred overseas up to 3 years prior to a base closure announcement. What is the estimated cost of the expanded eligibility you propose? Would you agree that the same logic might—and perhaps should—be applied to personnel assigned to other U.S. installations within that same 3 year period, who perhaps retained their house near a closing base with the expectation of returning there for a subsequent assignment?

Mr. **McMillan**. Approximately 144 employees annually would become eligible for benefits under the program if the proposed legislation is enacted. The cost of providing benefits to these people is estimated to be $1.6 million. As to your question regarding this same logic being applied to personnel assigned to other U.S. installations, no we do not agree. The intent of the program is to provide military members and civilian employees a form of "catastrophic financial insurance" against the loss in value of their "primary" residence due to the announcement of a base closure or reduction in operations. If an individual transferring from one continental U.S. installation to another retains a residence at the previous location, and purchases and lives in a house at the new location, it is usually because they hold the previous property for investment purposes or perhaps plan to retire in that area. Similarly, an individual who purchases and lives in a home at his overseas location makes that his "primary" residence and would not be eligible for the program based on the house he owned and occupied prior to the overseas tour. The program should not become a means of providing military members and civilian employees insured real estate investment opportunities. The potential cost of this option for an already expanding program would become prohibitive.

OVERSEAS BASES

Senator **Dixon**. When can we expect to receive a detailed plan addressing the specifics of the Department's overseas force reductions—a plan which spells out the specific installations which will be closed?

Mr. **McMillan**. At this time, it is not possible to provide exact numbers or a specific long range schedule due to uncertainties regarding overseas force structure, arms control negotiations, and the outcome of ongoing political events in the Soviet Union. At some overseas locations, both in the Far East and Europe, the United States is moving forward with reductions consistent with existing and projected operational requirements; however, the development of a new long term strategy and force structure continues. This will likely involve a comprehensive military restructuring of the NATO alliance to conform to the post-Cold War environment. Current planning reflects the continuation of U.S. forces permanently stationed in Europe, albeit at significantly lower levels and, as well, CONUS-based forces assigned to a reinforcement role. The U.S. European Command is preparing an updated base realignment plan for Europe that should reflect lower force levels and parallel reductions in the base structure. The study should be completed in the fall of 1991.

Senator **Dixon**. Mr. McMillan, can you update the subcommittee on progress in U.S. efforts to secure an equitable residual value for overseas facilities which U.S. forces will be vacating?

Mr. **McMillan**. The U.S. intends to seek maximum compensation from host governments. Subject to the provisions of existing agreements, U.S. officials calculate the starting point for negotiations by taking the sum of all facility investments made by the United States over the years and adjusting that sum for inflation and depreciation. This procedure places a value on all facilities that will be returned to host governments. The total amount of compensation that may be recouped for returned facilities will be the result of negotiations with host governments. Host nations can be expected to offset U.S. claims for residual value by submitting damage claims including environmental restoration.

Senator **Dixon**. Mr. McMillan, in the report accompanying the National Defense Authorization Act for fiscal year 1991, the conferees stated that the NATO Infrastructure account should be used primarily to support conventional arms control agreements, recoupment of past expenditures by member nations, and completion of previously obligated construction. In other words, the NATO Infrastructure program should be refocused to support the alliance's reduced force structure and revised military strategy. Frankly, in light of the substantial sums which continue to be requested for this account, it is difficult to see this shift in emphasis. Can you explain how the proposed expenditures by NATO which are supported by the fiscal year 1992 and fiscal year 1993 budget request differ from past construction programs?

Mr. McMillan. Currently, the NATO allies are revisiting all long range infrastructure plans and the Secretary General called for a fundamental review of the entire program. U.S. fiscal year 1992 and fiscal year 1993 budget requests were reduced accordingly from previously planned requests of about $600 million. This reduced level of infrastructure funding is required to complete ongoing projects that cannot be terminated economically or will be required in the post-CFE period. Funds are also required for the recoupment of funds for prior U.S. and allied prefinancing; CFE Treaty-related work; the restoration and emergency repair of existing infrastructure; and a very limited amount of essential new construction. By comparison to prior year programs which included substantial funding for new construction, less than 7 percent of the budgeted infrastructure funds will be for new starts at bases in allied countries and the continental United States. Some work is required to meet safety and security standards while other projects are technological upgrades to existing command and control systems. Limited construction is planned for NATO's Southern Region to bring some bases up to acceptable operational standards. The continuing instability in the Middle East warrants some essential construction in Turkey and Greece. New projects in the continental United States include facilities to support U.S. NATO-assigned Naval forces and Army units in their role as reinforcement forces.

OVERALL FUNDING LEVEL

Senator Dixon. In your personal view, do you believe that the fiscal year 1993 construction request is adequate to meet the services facility needs?

Ms. Livingstone. The Army's total budget must take into account the fiscal constraints of the Federal budget and outlays; the reduction in size of the military forces; and the realignment and closure of military installations. Many projects needed for Quality of Life and revitalization were deferred because of the construction pause. Although the budget request is below the Army's goal for revitalization, it does fund Chemical Demilitarization and other critical health, safety, and environmental construction projects. In addition, the request funds major repair and minor construction revitalization which in the past was funded in the Operation and Maintenance Appropriations.

Senator Dixon. In your prepared statement, you point out that the budget before us represents .68 percent of the Army's facility plant replacement value. I believe that this would suggest replacement at the rate of about once every 150 years. What is the Army's facility investment goal and how, in this budget climate, do you foresee moving toward it?

Ms. Livingstone. The Army's facilities investment goal is 1.75 percent of the Plant Replacement Value (PRV). In order to close the gap between our present investment rate and our goal, we plan to reduce the real property inventory and focus the facilities investment. The Army has augmented the Base Realignment and Closure initiative with an aggressive program to reduce real property at the installation level. Army Major Commands have been given reduction goals with money provided up front to facilitate the process. New construction is only approved on a 1 square foot of new for 1 square foot demolition of old facilities basis. While working to reduce the facilities base, the Army also plans to focus the dwindling resources on facilities that provide the quickest economic payback and have the greatest impact on operational readiness and Quality of Life.

Nonetheless, in the current budget environment, it will be extremely difficult to meet our investment goal. We will continue to articulate our infrastructure and Quality of Life needs as budget priorities are established.

O&M ISSUES

Senator Dixon. From the point of view of your installation commanders and major commands, do you believe that the transfer of most repair and minor construction funding into the military construction account will enhance flexibility and improve the level of facility investment? In your personal view, is this step toward local autonomy and innovation?

Ms. LIVINGSTONE. Installation commanders and major commands may view the transfer of resources from Operation and Maintenance, Army (OMA) to Military Construction Appropriation (MCA) for major repair and minor construction as an initiative that will limit their flexibility since funds appropriated to MCA for major repair and minor construction projects cannot be used for other purposes. Facility investment will improve since funds authorized and appropriated for facility investment will be used for facility investment. The inability to reprogram resources will cause a decrease in local autonomy. However, there will remain a wide range of opportunities for developing new methods and ideas for making programs work effectively.

IMPACT OF BASE CLOSURE ON BUDGET REQUEST

Senator DIXON. What changes to the administration budget request—either in the area of the Base Closure Account or in specific facility construction—are necessary in light of Secretary Cheney's base closure and realignment proposals?

Ms. LIVINGSTONE. If the Army's base closure and realignment recommendations are approved as submitted by the Secretary of Defense, approximately $400 million in the Base Closure Account funds could become available for use in executing BRAC 91 recommendations. As currently structured, money in the Base Closure Account could not be used for programs funded from Army TOA. In terms of military construction, the Army's base closure and realignment recommendations will make available an additional $21 million from the fiscal years 1992-1993 Military Construction, Army (MCA) account and $5 million from the proposed Defense Business Operations Fund (of the three projects at realignment locations that could be deleted, two of them are required at other locations).

CONSTRUCTION AND OTHER MORATORIA

Senator DIXON. Over the past 2 years the subcommittee has watched with increasing concern as the execution of construction which was authorized and appropriated by Congress has been further delayed by moratoria, prohibitions, and other extraordinary approval mechanisms. While I understand that this has been a period of uncertainty and transition, there is a growing concern that the Department proceed with implementing that which has been enacted into law.

Now that the Secretary's closure and realignment list has been released, can you advise the number and value of projects which have yet to be released by either the Office of the Secretary of Defense or by the service Secretary?

For the record, please provide a list of all such projects and the reasons why they have not been released for execution.

Ms. LIVINGSTONE. As of June 5, 1991, the Army has 348 Military Construction projects valued at $1,405 million that have not yet been released for execution. Many of these, however, are now being processed for release as we conclude our validation reviews.

The Deputy Secretary of Defense has lifted the prohibition on Military Construction projects and, in its place, imposed mechanisms to ensure that new construction conforms to long-term force reduction plans.

Under the new procedures, the approval of the Deputy Secretary of Defense is needed for Military Construction projects:

— In Europe, Japan, and the Republic of Korea,

— At military bases in the United States which the Secretary of Defense has recommended be closed or at which forces are to be realigned, and

— At bases in the Washington, DC area.

Military Construction projects elsewhere can proceed with the approval of the Secretary of the military department responsible for the project or the head of the responsible Defense agency.

The Secretary of the Army has delegated the authority for approval of Army projects to the Under Secretary of the Army. All construction projects at Army installations are being reviewed for the continued requirement and proper scope. These reviews are occurring based on award schedules. Army approval of appropriate construction projects will be granted as these reviews continue. Construction projects which require Deputy Secretary of Defense approval will also be submitted as required.

The Army will continue to carefully manage how we spend our limited construction resources.

Following are projects which have not yet been released for execution:

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)
Ft Wainwght	AK	Utilities Expansion	91	MCA	3,300
Ft Wainwght	AK	Battalion Headquarters	89	MCA	2,300
Ft Wainwright	AK	Elementary School	91	MCA	8,300
GOLOVIN	AK	ARMORY, SCOUT, NEW	91	MCNG	275
Anniston AD	AL	Inertial Guidance Unit Maintenance Fac	91	BRAC	1,350
BIRMINGHAM	AL	AVN POL JOINT USE ANG DESIGNING	90	MCNG	400
BREWTON	AL	ARMORY, 100-PERSON	91	MCNG	903
Ft McClelln	AL	Applied Instruction Facility	90	MCA	2,750
FT RUCKER	AL	FAMILY HOUSING NEW CONSTRUCTION	90	AFH	300
Ft Rucker	AL	Land Purchase	89	MCA	410
Ft Rucker	AL	Flight Simulator Building	91	MCA	3,400
Ft Rucker	AL	Automated Record Fire Range	90	MCA	1,150
MARION	AL	ARMORY	91	MCNG	764
Redstne Ars	AL	Scientific Library	90	MCA	890
Redstne Ars	AL	Physical Sciences Research Center	91	MCA	14,400
Redstne Ars	AL	Laboratory Facility Addition	90	MCA	17,500
Camp Robinson	AR	Arms Repair Shop	90	MCNG	399
FT CHAFFEE	AR	REGIONAL TNG CTR-MED	90	MCAR	2,097
FT CHAFFEE	AR	REGIONAL TRNG SITE-MAINT	91	MCAR	2,651
Pine Bl Ars	AR	Chemical Area Security Upgrade	89	MCA	3,050
Ft Huachuca	AZ	Building Rehabilitation	91	BRAC	4,600
Ft Huachuca	AZ	Test and Evaluation Center	89	MCA	5,400
Ft Huachuca	AZ	SCIF Building	90	BRAC	500
Ft Huachuca	AZ	FAMILY HOUSING IMPROVEMENTS	91	AFH	1,150
Ft Huachuca	AZ	Fire Station	91	MCA	1,050
Marana	AZ	AASF, Helipad Tiedowns	90	MCNG	399
MARANA	AZ	AVN, SIMULATOR BLDG (NOT AUTH)	91	MCNG	4,554
NAVAJO ARMY DEP	AZ	TRNG SITE,	91	MCNG	6,522
CAMP SAN LUIS O	CA	TRNG SITE, BARRACKS	91	MCNG	9,140
Ft Ord	CA	Automated Record Fire Range	90	MCA	2,450
Ft Ord	CA	Regional Water System-Phase I	91	MCA	7,400
Ft Ord	CA	Family Housing Improvements	91	AFH	2,700
LOS ALAMITOS	CA	AVN ADDITION/ALTERATION	90	MCNG	1,212
Oakland AB	CA	Operations Building	91	BRAC	120
Oakland AB	CA	PSF Ready Group Facility	91	BRAC	2,300
PITTSBURG	CA	OMS #29 ALTERATIONS	90	MCNG	324
SACRAMENTO (MAT	CA	AVN AASF C-12 AIRCRAFT HANGAR	90	MCNG	498
SACRAMENTO (MAT	CA	ARMORY, 200 PERSON	90	MCNG	2,146
Sacramto AD	CA	Microwave/Radar Maintenance Facility	90	MCA	3,900
SAN LUIS OBISPO	CA	USPFO ROOF REPAIR	90	MCNG	686
Falcon AFB	CO	Satellite Control Certification Facility	91	MCA	1,450
Ft Carson	CO	Automated Record Fire Range	90	MCA	2,250
Ft Carson	CO	Aviation Unit Maintenance Hangar	91	MCA	11,400
Ft Carson	CO	Army Headquarters Building	91	BRAC	16,500
Ft Carson	CO	Tank Gunnery Range Upgrade	91	MCA	5,600
Ft Carson	CO	Warehouse	91	BRAC	9,000
Ft Carson	CO	Tactical Equipment Shop	91	MCA	6,500
Pueblo AD	CO	Family Housing Improvements	91	AFH	24
Pueblo DA	CO	Chemical Area Security Upgrade	89	MCA	3,200
WATKINS	CO	ARMORY	91	MCNG	2,441
West Hartford	CT	Land Acquisition	90	MCAR	Lump Sum
Windsor Locks	CT	AAFS Parking Pads	90	MCNG	305
Ft McNair	DC	Family Housing Improvements	90	AFH	15
Ft McNair	DC	Family Housing Improvements	88	AFH	220
Walter Reed AMC	DC	Parking Structure	90	MCA	11,000
Walter Reed AMC	DC	Improve GFOQ	87	AFH	187
WALTER REED AMC	DC	FAMILY HOUSING IMPROVEMENTS	91	AFH	440
Jacksonville	FL	Aircraft Parking	90	MCNG	400

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)
Ft Benning	GA	Barracks Modernization	90	MCA	2,000
Ft Benning	GA	Recreation Center	91	MCA	3,000
Ft Benning	GA	Indoor Firing Range	91	MCA	2,930
Ft Benning	GA	Tactical Equipment Shop	90	MCA	2,600
Ft Benning	GA	Tactical Equipment Shop	91	MCA	4,950
Ft Benning	GA	Urban Terrain Assault Course	90	MCA	1,250
FT GILLEM (AT	GA	ARMORY, 800 PERSON	89	MCNG	3,210
FT GORDON	GA	NEW USARC	91	MCAR	9,534
Ft Gordon	GA	Soldier Service Center	91	MCA	10,600
Ft Gordon	GA	Family Practice Clinic	91	BRAC	4,850
Ft Stewart	GA	Child Development Center	91	MCA	1,650
WINDER	GA	ARMORY, ADDITION/ALTERATION	90	MCNG	958
Germany	GE	Wartime Host Nation Support	91	MCA	2,500
Hohenfels	GE	OPFOR Vehicle Sheds	89	MCA	9,400
Hohenfels	GE	Child Development Center	89	MCA	1,550
Hohenfels	GE	Upgrade retention Dam	91	UMMCA	802
Kaiserslautern	GE	Missile Maintenance Shop	91	MCA	5,000
Ft Shafter	HI	Access Roads	91	MCA	7,400
Ft Shafter	HI	Barracks with Dining Facility	90	MCA	9,300
Hickam AFB	HI	AAFES Warehouse	91	BRAC	8,100
Schofield Bks	HI	Military Operations on Urbanized Terrain	90	MCA	5,600
Schofield Bks	HI	Non-TOE Maintenance Facility	91	BRAC	7,600
CAMP DODGE	IA	LAND ACQUISITION (1469 AC)	90	MCNG	6,857
COUNCIL BLUFFS	IA	ARMORY	91	MCNG	2,115
COUNCIL BLUFFS	IA	OMS	91	MCNG	528
Price SptCr	IL	Barracks Mod w/Dining Facility	90	MCA	3,750
Ft Ben Harr	IN	Army Headquarters Building	91	BRAC	19,000
Ft Ben Harr	IN	Learning Research Center	91	MCA	4,300
Ft Ben Harr	IN	Fire Station	91	MCA	1,300
Ft Ben Harr	IN	Electrical Substation Upgrade	91	BRAC	1,050
KNOX	IN	AVN LAASF (LIMITED)	91	MCNG	3,050
KNOX	IN	ARMORY, 100-PERSON	91	MCNG	1,376
Vincenza	IT	Family Housing Improvements	89	AFH	140
SAGIMIHARA	JA	FAMILY HOUSING IMPROVEMENTS	91	AFH	1,650
Camp Casey	KO	Auto Rifle Range	87	MCA	3,600
Cp Carroll	KO	Expand Paint Facility	91	UMMCA	995
Cp Eagle	KO	Dining Hall Addition	91	UMMCA	370
K-16 AAF	KO	Flight Simulator Building	91	MCA	1,500
Various	KO	Washracks (9)	86	MCA	1,810
Ft Leavenworth	KS	Child Development/Religious Education Fac	90	MCA	5,500
Ft Leavenworth	KS	FAMILY HOUSING IMPROVEMENTS	90	AFH	10
Ft Leavenworth	KS	FAMILY HOUSING IMPROVEMENTS	91	AFH	10
Ft Riley	KS	Tactical Equipment Shop	91	MCA	12,200
Ft Riley	KS	Child Development Center	90	MCA	1,500
Kwajalein	KW	Sewage Treatment Plant	90	MCA	3,250
ASHLAND	KY	ARMORY, 200 PERSON	90	MCNG	2,464
Ft Knox	KY	Barracks Renovation	91	BRAC	3,400
Ft Knox	KY	Automated Record Fire Range	91	MCA	2,800
Ft Knox	KY	Air Base Ground Defense School	91	BRAC	5,600
Ft Knox	KY	Air Base Ground Defense Ranges	91	BRAC	5,700
Lex-Blue DA	KY	Calibration Facility	91	BRAC	730
Lex-Blue DA	KY	Chemical Area Security Upgrade	89	MCA	770
Ft Polk	LA	General Purpose Warehouses	90	MCA	1,150
Ft Polk	LA	General Purpose Warehouse	90	MCA	12,600
Ft Polk	LA	Consolidated Maintenance Facility	91	MCA	22,000
Ft Polk	LA	Range Modernization	90	MCA	9,600
FT POLK (LEES	LA	MATES EXPANSION	90	MCNG	3,306

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)
Ft Devens	MA	Building Alteration	90	BRAC	4,700
Ft Devens	MA	Building Alteration	90	BRAC	4,700
Ft Devens	MA	USAISC Headquarters Building	90	BRAC	17,000
Ft Devens	MA	Information Systems Facility	91	BRAC	11,600
FT DEVENS	MA	REGIONAL TRNG SITE-MAINT	90	MCAR	2,705
Ft Devens	MA	Upgrade Utilities	91	BRAC	650
Aberdeen PG	MD	Security Upgrade	91	MCA	1,700
Aberdeen PG	MD	Relocate/Modernize Fire Barricades	91	MCA	10,400
ABERDEEN PG	MD	FAMILY HOUSING IMPROVEMENTS	89	AFH	2,800
Aberdeen PG	MD	Toxicology Research Facility	91	MCA	33,000
ABERDEEN PG	MD	FAMILY HOUSING IMPROVEMENTS	91	AFH	2,800
Aberdeen PG	MD	ADP Facility Addition	90	MCA	1,700
Ft Detrick	MD	Storage Facility Addition	91	MCA	530
Ft Detrick	MD	Chapel Center/Child Development Center	90	MCA	2,300
Ft Meade	MD	Child Development Center	90	MCA	6,200
Ft Ritchie	MD	Child Development Center Addition	90	MCA	630
Ft Ritchie	MD	FAMILY HOUSING IMPROVEMENTS	91	AFH	980
Ft Ritchie	MD	ARMORY, 60-PERSON	91	MCNG	1,800
BANGOR	ME	ARMORY, AFRC	91	MCNG	3,058
BERRIEN CTY-BEN	MI	ARMORY, 60-PERSON	90	MCNG	1,250
CAMP GRAYLING	MI	RANGE, MPRC-H MULTIPURPOSE (RETS	90	MCNG	7,000
Detroit Ars	MI	Laboratory and Test Building	91	BRAC	6,200
MENOMINEE	MI	ARMORY, 60-PERSON	90	MCNG	1,167
SHIAWASSEE CTY	MI	ARMORY, 100-PERSON	90	MCNG	1,450
CAMP RIPLEY	MN	MATES ADD	91	MCNG	6,108
Ft Leo Wood	MO	Applied Instruction Building	91	BRAC	10,400
Ft Leo Wood	MO	Automated Record Fire Ranges	90	MCA	2,150
Ft Leo Wood	MO	Instructional Media Center	90	MCA	8,300
Ft Leo Wood	MO	Applied Instruction Facility	91	MCA	900
Ft Leo Wood	MO	Physical Fitness Training Center	91	MCA	8,800
JEFFERSON CITY	MO	OMS	91	MCNG	942
JEFFERSON CITY	MO	USPFO WHSE	91	MCNG	2,800
JEFFERSON CITY	MO	ARMORY, 400-PERSON	91	MCNG	5,049
JEFFERSON CITY	MO	CSMS	91	MCNG	7,800
JEFFERSON CITY	MO	TRNG SITE MILITARY EDUCATION FAC	91	MCNG	2,329
ACKERMAN	MS	ARMORY, ADD/ALT	90	MCNG	735
AMORY	MS	ARMORY, 100-PERSON ADDITION	90	MCNG	910
CAMP MCCAIN	MS	TRNG SITE, HELICOPTER	89	MCNG	1,029
CAMP MCCAIN	MS	TRNG SITE TISA	91	MCNG	780
CAMP MCCAIN	MS	LAND ACQUISTION	90	MCNG	4,000
CAMP MCCAIN	MS	RANGE, TANK TABLE 9&11	91	MCNG	600
CAMP MCCAIN	MS	TRNG SITE, WASTE WATER RENOVATIO	89	MCNG	500
CAMP MCCAIN	MS	TRNG SITE, NATURAL GAS DISTRIBUT	89	MCNG	500
CAMP MCCAIN	MS	TRNG SITE, AMMO STORAGE	91	MCNG	500
CAMP SHELBY	MS	CSMS # 1	91	MCNG	3,907
CAMP SHELBY	MS	TRNG SITE, BOQ PHASE III (04-06)	91	MCNG	450
CAMP SHELBY	MS	TRNG BOQ PHASE I (04-06)	90	MCNG	700
FULTON	MS	ARMORY, ADD/ALT	91	MCNG	535
GRENADA	MS	TRNG MUNICIPAL AIRPORT IMPROVEME	90	MCNG	3,732
IUKA	MS	ARMORY, ADD/ALT	90	MCNG	710
LOUISVILLE	MS	OMS ADD	90	MCNG	600
PHILADELPHIA	MS	OMS ADD	90	MCNG	400
STARKVILLE	MS	ARMORY, ADD/ALT	91	MCNG	975
Ft Harrison	MT	UTES add	90	MCNG	350
Ft Harrison	MT	CSMS Add	90	MCNG	375
LIBBY	MT	ARMORY, 60-PERSON	90	MCNG	827
Ft Bragg	NC	Installation Map Depot	91	MCA	1,750

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)
Ft Bragg	NC	Aviation Unit Maintenance Hangars	90	MCA	32,000
Ft Bragg	NC	Battalion Headquarters	91	MCA	1,850
Ft Bragg	NC	Maintenance Facility (Phase I)	91	MCA	31,800
Ft Bragg	NC	Tactical Equipment Shop	91	MCA	7,400
Ft Bragg	NC	Special Operations Command Headquarters	90	MCA	21,100
Ft Bragg	NC	Land Purchase	91	MCA	720
Ft Bragg	NC	SOF Headquarters Addition	91	MCA	4,950
Ft Bragg	NC	Company Ops Fac - Follow-on Contract	88	MCA	2,300
Ft Bragg	NC	Tactical Equipment Shop	91	MCA	11,600
Ft Bragg	NC	Maintenance Facility Infrastructure	90	MCA	7,000
Ft Fisher	NC	Classroom Add	90	MCNG	399
FARGO	ND	ARMORY, ARMED FORCES RESERVE CTR	91	MCNG	7,700
Concord	NH	Land Acquisition	89	MCAR	285
FT DIX	NJ	FAMILY HOUSING IMPROVEMENTS	91	AFH	6,100
FT MONMOUTH	NJ	FAMILY HOUSING IMPROVEMENTS	90	AFH	5,100
Ft Monmouth	NJ	Improve Electrical Distribution	90	MCA	8,600
NEWTON	NJ	RANGE, MINI TANK	90	MCNG	251
Picatinny Ars	NJ	Secondary Elec Feeder	91	UMMCA	570
Picatny Ars	NJ	Armament Technology Laboratory	90	MCA	11,800
VINELAND	NJ	RANGE, MINI TANK	90	MCNG	214
WASHINGTON	NJ	RANGE, MINI TANK	90	MCNG	188
ALBUQUERQUE	NM	OMS (HAWK)	91	MCNG	1,950
ALBUQUERQUE	NM	TRNG SITE UTILITIES, HAWK BN	91	MCNG	2,127
ALBUQUERQUE	NM	TRNG SITE, HAWK BN	91	MCNG	1,549
CLOVIS	NM	OMS	90	MCNG	714
ESPANOLA	NM	ARMORY, 100-PERSON	91	MCNG	1,600
PORTALES	NM	ARMORY, 100-PERSON	91	MCNG	1,600
RIO PUERTO (ALB	NM	ARMORY, 800-PERSON	91	MCNG	3,400
SANTA FE	NM	ALT / EXP USARC	90	MCAR	3,601
SPRINGER	NM	OMS	90	MCNG	714
Hawthrn AAP	NV	Truck Inspection/Parking Area	91	BRAC	520
STEAD (RENO)	NV	AVN AASF ADDITION PH II	90	MCNG	1,000
Ft Drum	NY	Central Wash Facility	91	MCA	8,800
Ft Drum	NY	General Instruction Building	91	MCA	608
Ft Totten	NY	Add/Alter OMS	88	MCAR	6,902
GUILDERLAND	NY	RANGE, MAC (MOUT ASSAULT COURSE)	91	MCNG	800
USMA	NY	Regional Sewage System Connection	89	MCA	2,500
MUSKINGUM CTY (	OH	LAND ACQUISITION (16,200 AC)	91	MCNG	5,670
TOLEADO	OH	USARC / OMS	91	MCAR	7,300
CAMP GRUBER	OK	RANGE, KNOWN DISTANCE	90	MCNG	427
CAMP GRUBER	OK	RANGE, MODIFIED RECORD FIRE(RETS	90	MCNG	356
Ft Sill	OK	Child Development/Religious Education Fac	90	MCA	4,850
Ft Sill	OK	Infantry Remote Target System Range	90	MCA	3,400
Ft Sill	OK	FAMILY HOUSING IMPROVEMENTS	91	AFH	4,500
Ft Sill	OK	Modernize Sewage Treatment Plant	91	MCA	21,600
Ft Sill	OK	Firefinder Classroom Addition	90	MCA	970
Ft Sill	OK	Communications-Electronics Lab Addn	91	MCA	3,550
Ft Sill	OK	FAMILY HOUSING IMPROVEMENTS	89	AFH	4,000
Ft Sill	OK	Tactical Equipment Shop	90	MCA	6,100
OWASSO (SAND SP	OK	OMS # 6	90	MCNG	400
Carlisle Bks	PA	Storm Drainage	91	UMMCA	430
Ft Indt Gap	PA	Ammunition Supply Point	91	MCA	1,350
FT INDTOWN GAP	PA	REGIONAL TRNG SITE-MAINT	90	MCAR	2,600
Ft Indtwn Gap	PA	Ammunition Storage	91	BRAC	1,750
New Cumberland	PA	Access Roads	89	MCA	5,300
New Cumberland	PA	Hazardous Material Storage Facility	90	MCA	14,000
NORRISTOWN	PA	ARMORY, 200 PERSON	91	MCNG	3,028

LOCATION	STATE	PROJECT DESCRIPTION	FY	TYPE FUNDS	AMOUNT ($000)
Tobyhnna AD	PA	COMSEC Facility	91	BRAC	13,200
Tobyhnna AD	PA	Satellite Systems Maintenance Facility	91	MCA	6,800
Ft Davis	PN	Site Prep/ Util for School	91	UMMCA	510
EASTOVER (CONGA	SC	ARMORY	90	MCNG	1,500
FOUNTAIN INN	SC	ARMORY	91	MCNG	2,000
Ft Jackson	SC	Medical/Dental Reception Processing	91	BRAC	2,450
Ft Jackson	SC	Automated Record Fire Range	91	MCA	1,600
Ft Jackson	SC	Applied Instruction Building	91	BRAC	10,000
GREENVILLE	SC	ARMORY	91	MCNG	2,500
GREENVILLE	SC	OMS	91	MCNG	1,800
GREENWOOD (WARE	SC	ARMORY	91	MCNG	2,000
PICKENS	SC	ARMORY	91	MCNG	2,000
PINE RIDGE (LEX	SC	ARMORY, 200-PERSON	90	MCNG	2,175
HUMBOLDT	TN	ARMORY, 200-PERSON	90	MCNG	1,453
HUNTINGDON	TN	ARMORY, 100-PERSON	91	MCNG	1,319
JACKSON	TN	ARMORY, ADD/ALT	91	MCNG	898
JACKSON	TN	AVN LIMITED AASF	90	MCNG	1,636
LENOIR CITY	TN	ARMORY, 60-PERSON	91	MCNG	1,230
Loc 276, TU	TU	Operations Facility	89	MCA	5,300
AUSTIN (CAMP MA	TX	ARMORY, 800-PERSON (STARC)	91	MCNG	6,284
BROWNWOOD (CAMP	TX	ARMORY	91	MCNG	2,142
CAMP BOWIE (BRO	TX	LAND ACQUISITION	90	MCNG	1,750
CAMP BOWIE (BRO	TX	TRNG SITE, LAND ACQUISITION	91	MCNG	1,901
Camp Swift	TX	Seal Manholes	91	MCA	100
Cor Chr AD	TX	Aircraft Instrument Calibration Facility	90	MCA	5,200
DALLAS #3 (REDB	TX	ARMORY ADD/ALT	91	MCNG	2,000
FORT HOOD NORTH	TX	MATES ADD	91	MCNG	14,369
Ft Bliss	TX	Renovate Enlisted Barracks	91	MCA	9,800
Ft Bliss	TX	Renovate Enlisted Barracks/Dining Facility	91	MCA	10,200
FT BLISS	TX	FAMILY HOUSING NEW CONSTRUCTION	89	AFH	9,100
Ft Hood	TX	Vehicle Wash Facility	90	MCA	7,000
Ft Hood	TX	Replace Vehicular Bridges	91	MCA	469
Ft Hood	TX	Range Modernization	91	MCA	3,050
Ft Hood	TX	Barracks Modernization	91	MCA	11,000
Ft Hood	TX	Range Control Facility	91	MCA	4,400
Ft Hood	TX	FAMILY HOUSING IMPROVEMENTS	91	AFH	6,500
Ft Hood	TX	Consolidated Maintenance Facility	91	MCA	22,700
Ft Hood	TX	Battalion Headquarters	90	MCA	2,800
Ft Hood	TX	Modified Record Fire Range	91	MCA	1,650
Ft Sam Hous	TX	Consolidated Maintenance Facility	91	MCA	13,200
Ft Sam Hous	TX	Physical Fitness Training Center	91	MCA	7,100
Ft Sam Hous	TX	Medical Research Laboratory	91	MCA	13,400
Orange	TX	Land/Fac Acquisition	90	MCNG	395
Red Rivr AD	TX	Central Distribution Center - Phase III	90	MCA	39,000
WACO	TX	ARMORY, ADD/ALT	91	MCNG	2,162
WACO	TX	OMS	91	MCNG	726
WYLIE (MC KINNE	TX	ARMORY, 60-PERSON	91	MCNG	2,227
Classified Loc	US	Land Acquisition - SOF	90	MCA	600
Camp Williams	UT	Range, CBT Pistol	90	MCNG	375
Camp Williams	UT	Range MFR	91	MCNG	1,070
Dugway PG	UT	Simulant Mixing Facility	91	MCA	450
Dugway PG	UT	Vehicle Maintenance Facility	90	MCA	1,400
Tooele AD	UT	Alter Shops to Warehouses	91	BRAC	5,600
Tooele AD	UT	General Supply Warehouse	91	BRAC	3,850
WEST JORDAN (SL	UT	AVN, AASF ADD	91	MCNG	6,952
WEST JORDON	UT	ARMORY	91	MCNG	4,145
WEST JORDON	UT	OMS	91	MCNG	799

LOCATION	STATE	PROJECT DESCRIPTION	FY	FUNDS	($000)
EMPORIA	VA	ARMORY, 60-PERSON	91	MCNG	1,697
Ft A P Hill	VA	Fuel Storage Facility	91	MCA	3,200
Ft A P Hill	VA	Ammunition Storage	91	BRAC	1,700
Ft Belvoir	VA	Headquarters Complex	91	BRAC	21,000
Ft Belvoir	VA	Access Roads	91	MCA	3,000
Ft Belvoir	VA	Fixed Wing Runway	91	MCA	1,400
Ft Belvoir	VA	Fire Station	91	MCA	1,100
Ft Belvoir	VA	Building Improvements	91	BRAC	1,000
Ft Lee	VA	Enlisted Petroleum Training Facility	90	MCA	8,300
Ft Lee	VA	Enlisted Personnel Dining Facility	91	BRAC	2,300
Ft Myer	VA	Child Development Center	91	MCA	2,150
Ft Myer	VA	Shoppette	91	BRAC	850
Ft Myer	VA	Exchange Branch	91	BRAC	1,600
Ft Myer	VA	FAMILY HOUSING NEW CONSTRUCTION	86	AFH	490
Ft Story	VA	Emergency Services Building	91	MCA	1,600
NEWPORT NEWS	VA	ARMORY, 200-PERSON	91	MCNG	2,481
WOODSTOCK	VA	ARMORY (NO STATE FUNDS)	91	MCNG	1,493
St Croix	VI	Aviation Facility	90	MCNG	1,138
ST. CROIX	VI	USPFO OFFICE	90	MCNG	2,068
ST. CROIX	VI	CSMS	90	MCNG	2,961
ETHAN ALLEN	VT	RANGE, MULTIPURPOSE TANK (RETS)	90	MCNG	2,398
Ft Lewis	WA	Chapel Center	91	MCA	2,850
Ft Lewis	WA	FAMILY HOUSING IMPROVEMENTS	90	AFH	2,150
Ft Lewis	WA	Brigade Headquarters	91	MCA	8,800
Ft Lewis	WA	Tactical Support Center	91	MCA	5,100
Ft Lewis	WA	Automated Record Fire Range	91	MCA	1,250
Ft Lewis	WA	Administration Facility	91	BRAC	1,300
TACOMA (WATERCR	WA	TRNG SITE, PIER FACILITY ACQ/RHA	91	MCNG	2,863
BELOIT	WI	ARMORY	91	MCNG	2,200
Ft McCoy	WI	Central Wash Facility	91	MCA	5,000
Ft McCoy	WI	Multi-Purpose Training Range	91	MCA	8,900
MADISON (MITCHE	WI	ARMORY, STARC	91	MCNG	7,372
WAUKESHA	WI	MVSB MOTOR VEHICLE STORAGE BUILD	91	MCNG	228
WAUKESHA	WI	ARMORY, ADD/ALT	91	MCNG	1,113
BECKLEY	WV	NEW USARC	90	MCAR	3,445
Bluefield	WV	Land Acquisition	91	MCAR	Lump Sum
BUCKHANNON	WV	USPFO ADD/ALT	90	MCNG	1,500
BUCKHANNON	WV	USPFO OFFICE ADDITION	89	MCNG	325
CAMP DAWSON	WV	TRNG SITE, TRNG FACIL PH IV	91	MCNG	2,500
CAMP DAWSON, KI	WV	LAND ACQUISITION VOLKSTONE PROPE	90	MCNG	1,868
Charleston	WV	New USARC/OMS	91	MCAR	5,000
CHARLESTON	WV	ARMORY, 200-PERSON	91	MCNG	2,900
Clarksburg-AMSA	WV	Land Acquisition	91	MCAR	Lump Sum
Clarksburg-USAR	WV	Land Acquisition	91	MCAR	Lump Sum
ELKINS	WV	NEW USARC	90	MCAR	1,772
Grantsville	WV	Land Acquisition	91	MCAR	Lump Sum
KINGWOOD	WV	NEW USARC	90	MCAR	1,810
KINGWOOD	WV	OMS	91	MCNG	1,100
Lew Jane/Weston	WV	Land Acquisition	91	MCAR	Lump Sum
Lewisburg	WV	Land Acquisition	91	MCAR	Lump Sum
MORGANTOWN	WV	NEW USARC	90	MCAR	2,333
PARKERSBURG (BL	WV	OMS ADD	91	MCNG	900
RAINELLE	WV	NEW USARC	90	MCAR	2,646
Valley Grove/Wh	WV	Land Acquisition	91	MCAR	Lump Sum
Weirton	WV	Land Acquisition	91	MCAR	Lump Sum
WHEELING	WV	ARMORY, 100-PERSON	90	MCNG	2,293
WHEELING	WV	AVN (LIMITED) NEW AASF	90	MCNG	3,833
CAMP GUERNSEY	WY	TRNG SITE, AIRFIELD IMPV PH I	91	MCNG	2,947

LOCATION	STATE	PROJECT DESCRIPTION	FY	FUNDS	($000)
CHEYENNE	WY	ARMORY, ANNEX	90	MCNG	2,351
Classifd OS	ZZ	War Reserve Storage	90	MCA	6,100
OS Loc Unsp	ZZ	Pre-Positioned War Materiel Facilities	89	MCA	4,450
OS Loc Unsp	ZZ	Intermediate Staging Facility	89	MCA	11,300

DEFENSE BUSINESS OPERATING FUND

Senator DIXON. In your statement, you suggest that through the industrial funding mechanism, costs will be more easily identified and thereby overhead costs will be reduced. You go on to say, ". . . we expect to improve the management of scarce resources on those outputs that yield the best return on investment." I am unclear how the DBOF mechanism will necessarily reduce overhead. I am also curious about the logic of directing scarce defense resources based upon a yardstick of return on investment. In your view, how will the DBOF process insure adequate facility investment to meet both efficiency and quality of life needs of industrially funded activities?

Ms. LIVINGSTONE. Under the DBOF concept, part of the rate structure charged to the customers of an industrially funded activity would include amounts to fund capital investment. The rates would include capital budgeting requirements which are necessary to modernize [illegible] plant to fulfill the support mission. Theoretically under the DBOF business-like approach, the quality of the product would determine customer satisfaction. Competition for customers between DBOF activities could encourage investment in facilities. The execution details are still evolving and the level of facilities investment under DBOF remains to be seen.

OVERSEAS BASES

Senator DIXON. Mrs. Livingstone, according to the Army's part of that force structure plan, most ground force reductions will occur during fiscal year 1992. Do you believe that the planned pace of overseas reductions can be done without compromising the stewardship over equipment and facilities, and without undue hardship on Army families?

Ms. LIVINGSTONE. Army leadership has devoted much time and effort developing comprehensive plans addressing overseas facilities infrastructure and equipment requirements in light of impending troop reductions. By far the greatest impact is on Europe. Facility plans have the primary goal of retaining the best facilities commensurate with mission requirements and divesting itself of older, more maintenance intensive facilities. Another goal is to place most military families in government controlled quarters by retaining adequate units (Government-owned, Build-to-Lease, and Government Rental Housing Program) proportional to needs, and the cross-leveling of housing assets between neighboring military communities.

Equipment transfer is an ambitious and difficult undertaking that is labor and resource intensive. Equipment that is excess to OCONUS unit needs will be transferred to CONUS to fill shortages, modernize CONUS units, and improve readiness Army-wide.

Prior to Operation Desert Storm, the Army indicated that there was a limit to what it could reduce overseas and still prevent readiness degradation and adverse affects on soldiers and families. This limit was based upon pre-Desert Shield planning factors. The requirements of Operation Desert Shield and the quick resolution of that conflict changed these planning factors and should allow the Army to reduce force structure in fiscal year 1992 faster than expected. The Army is able to redeploy from Southwest Asia to other destinations the equipment of some European inactivating units so that equipment maintenance and turn-in is accomplished in Saudi Arabia rather than Europe. While planning and execution under these unusual circumstances will allow the Army to reduce its force significantly in Europe during fiscal year 1992, the Army cannot sustain that pace into fiscal year 1993 without compromising our stewardship over equipment and facilities, and without undue hardship on Army families.

RESERVE COMPONENT CONSTRUCTION

Senator DIXON. Last year, the authorization conferees were critical of the military construction planning and programming process for the Army's Reserve components because it did not seem to be able to respond to late decisions to provide equipment modernization to Reserve and Guard units. For example, units receiving Apache helicopters did not have necessary support facilities. They were not even in the budget request last year. Now the Army Reserve components face the twin disruptions of accelerated equipment modernization and planned force reductions and unit activations. In your view has the facility planning and programming process of the Reserve components been modified to accommodate these changes? Does the Army Reserve and National Guard budget request support the equipment changes which will flow from the drawdown of Active forces, and hedge against the planned reduction in Reserve component forces?

Ms. Livingstone. The systematic procedure for identifying Reserve component facility requirements emanates from the Army's force structure development process using the Total Force Policy, Total Army Analysis, other force validation programs and equipment fielding programs such as the Dedicated Procurement Program. Previous structuring procedures ensured only that the manpower and skill demographics could support the proposed structuring with no consideration of the facility support available. In addition, the uncertainty of equipment fielding schedules often complicated facility planning and programming.

Currently, the Army's Reserve components identify and program facility requirements through the comparison of existing assets against the needs developed through the force structuring and equipment fielding processes. Our strategy to satisfy the identified facility needs is as follows:

— make maximum use of the existing infrastructure,
— maintain what we currently own,
— revitalize substandard facilities,
— optimize opportunities from base closures and realignments,
— construct new facilities.

Through the synergism of the Total Army Basing Study, the Army's Reserve components systematically review its real property inventory to catalogue properties effectively and to examine all opportunities for more efficient management of them. As the dynamics of force structure changes and demographic stationing impact on the inventory, potential candidates for closure might be identified, as well as opportunities for savings through joint construction.

The validation process for the BRAC 91 Study determined that the Reserve component's federally-owned properties are at peak capacity usage and in most cases could not house any additional units or activities. Additionally, the Army Aviation Modernization program/study held off the Reserve component request for AH-64, Apache Helicopter facilities until the study was completed and approved. Submission of the fiscal year 1992 and fiscal year 1993 programs was the first opportunity to include these facilities.

The funds to support equipment changes as a result of drawdown from the Active forces are not part of the Army's Reserve component equipment budget. Those dollars are part of the Army's supplemental appropriation to support retrograde of equipment from Operation Desert Storm. Since most of the Combat Service Support equipment needs of the Reserve components will and can be met only by shipping that equipment from Southwest Asia, the Army needs this supplemental appropriation in order to equip the Reserve components.

CHEMICAL DEMILITARIZATION

Senator Dixon. Mrs. Livingstone, as the overall level of construction investment decreases, the proportion of the Army program consumed by the chemical demilitarization program grows substantially. I believe the Army was to have provided the committee a revised chemical demilitarization plan last March. We have yet to receive it. If the committee is to make prudent decisions on this important program, we need the most current Army thinking on this program. Do you know the status of the overall plan, and when we can expect to receive it? For the record, can you provide the subcommittee a current financial profile of this program, indicating facility investments by installation over the next 6 years?

Ms. Livingstone. The Life Cycle Cost Estimate and corresponding program schedules were provided to the Congress on May 20, 1991.

The current life cycle cost for the Chemical Stockpile Disposal Program is $6.5 billion. Facility investment costs, which include the construction of the disposal facilities, support projects, and the acquisition of disposal equipment, follow:

[Dollars in millions]

Site—Appropriation	Fiscal year											
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
JACADS, procurement	12.7	5.7	5.1	1.5	1.5	1.6	1.7	1.8	....	....	....	31.6
Tooele:												
Procurement	43.5	18.1	14.8	68.4	50.8	1.0	0.3	5.0	....	....	....	201.9
Milcon	....	49.6	....	61.2	14.7	....	....	....	....	....	....	125.5
Anniston:												
Procurement	....	0.8	....	1.2	59.9	73.1	46.0	4.8	0.5	....	....	186.3
Milcon	....	....	....	15.1	100.3	....	....	....	....	....	....	115.4
Umatilla:												
Procurement	....	0.8	....	0.5	35.8	49.3	79.7	20.9	1.0	6.6	....	194.6
Milcon	....	....	....	....	11.1	117.2	....	....	....	....	....	128.3
Pine Bluff:												
Procurement	....	0.9	0.2	0.9	56.0	27.8	51.5	17.0	3.8	....	....	158.1
Milcon	....	....	....	....	....	68.6	....	....	....	....	....	68.6
Pueblo:												
Procurement	....	....	0.3	0.1	....	53.4	36.2	76.8	22.5	0.2	....	189.5
Milcon	....	....	....	....	6.3	....	96.5	....	....	....	....	102.8
Lexington:												
Procurement	....	....	0.3	0.1	....	53.8	32.3	78.7	23.1	0.5	....	188.8
Milcon	....	....	....	....	....	....	113.2	....	....	....	....	113.2
Newport:												
Procurement	....	....	0.3	0.3	....	15.3	42.6	50.3	16.3	0.5	....	125.6
Milcon	....	....	....	....	....	....	59.9	....	....	....	....	59.9
Aberdeen:												
Procurement	....	....	0.3	0.1	....	8.2	38.2	56.3	21.1	3.8	....	128.0
Milcon	....	....	....	....	....	....	72.9	....	....	....	....	72.9
CDTF:												
Procurement	11.3	1.7	7.2	6.4	0.2	....	0.1	0.1	0.1	0.1	0.1	27.3
Milcon	....	16.1	....	....	....	....	....	....	....	....	....	16.1

Senator DIXON. In a hearing that this subcommittee held on April 17, I asked General Tuttle to provide us with the information used to determine what kind of savings there would be in moving approximately 1,400 personnel from the Rock Island Arsenal to the Redstone Arsenal in Huntsville. I made this request because I could not understand why the Army would prefer spending the money to build new facilities at Redstone instead of utilizing the over 400,000 square feet of unused office space currently available at Rock Island.

In response to my request, General Tuttle sent the committee a paper. This paper was expected to show how the Army came to the conclusion that this plan would result in savings to the taxpayer. However, this paper indicated that major construction expenditures are necessary at Redstone. In fact, these expenditures steadily increase from over $2 million in year 1 of the plan to over $16 million in year 4. Please explain for this subcommittee how the Army finds the move to Redstone more cost-effective.

Ms. LIVINGSTONE. The annual steady-state savings expected for the move from Rock Island to Redstone is $39 million beginning in fiscal year 1998. This savings is primarily derived by the elimination of 972 civilian personnel in addition to the transfer of approximately 1,400 positions that would be moved to Redstone Arsenal. The upfront cost for this move involves construction of 250 thousand square feet of administrative space at Redstone Arsenal for $38 million moving expenses totalling $28 million and an additional $11 million of other costs. The ability to eliminate 972 civilian employees is contingent on the efficiencies achieved by merging the two Inventory Control Point (ICP) activities at one location, an operational decision that is facilitated by the elimination of one major subordinate command of the Army Materiel Command when Depot Systems Command and the Armament, Munitions and Chemical Command are merged to form the Industrial Operations Command.

OVERALL FUNDING LEVEL

Senator DIXON. In your personal view, do you believe that the fiscal year 1993 construction request is adequate to meet the services facility needs?

Miss **Schafer**. The Navy's fiscal year 1993 military construction request supports only critical safety, health, environmental or essential needs. There is no funding for rehabilitation, modernization or replacement of facilities.

FAMILY HOUSING

Senator **Dixon**. Miss Schafer could you provide an estimate of the additive funds needed in fiscal year 1992 and fiscal year 1993 to stabilize your level of deferred family housing maintenance and repair?

Miss **Schafer**. The Navy's current maintenance and repair backlog is $1.12 billion. Additionally, the inventory will experience further deterioration each year as it gets older. In order to stabilize our backlog or to keep it from increasing above the current $1.12 billion level, an additional $40 million in fiscal year 1992 and $34 million in fiscal year 1993 would be required. This additional funding would allow us to cover the anticipated annual deterioration of the Navy's family housing assets while keeping the deferred repair backlog at its present level.

IMPACT OF BASE CLOSURE

Senator **Dixon**. What changes to the administration budget request—either in the area of the base closure account or in specific facility construction—are necessary in light of Secretary Cheney's base closure and realignment proposals?

Miss **Schafer**. We will be in a better position to assess potential changes to the administration's budget request for base closure or military construction once the results of the Base Closure and Realignment Commission's recommendations and their subsequent approval are finalized.

CONSTRUCTION AND OTHER MORATORIA

Senator **Dixon**. Over the past 2 years the subcommittee has watched with increasing concern as the execution of construction which was authorized and appropriated by Congress has been further and further delayed by moratoria, prohibitions, and other extraordinary approval mechanisms. While I understand that this has been a period of uncertainty and transition, there is a growing concern that the Department proceed with implementing that which has been enacted into law.

Mr. McMillan and service witnesses, now that the Secretary's closure and realignment list has been released, can you advise the number and value of projects which have yet to be released either by the Office of the Secretary of Defense or by the service Secretary? For the record, please provide a list of all such projects and the reasons why they have not been released for execution.

Miss **Schafer**. 386 fiscal year 1991, and prior, Milcon projects valued at $1.8 billion were impacted. Currently, 64 projects valued at $291 million have been released for execution. The remaining projects, attached, are being reviewed and processed for release as they become ready for execution. Review of the projects impacted by the ongoing Base Closure and Realignment Commission's study must be conducted in accordance with OSD guidance that includes Deputy Secretary of Defense concurrence.

IMPACTED PROJECTS

	Cost
NAVY PROJS REQ SECNAV APPROVAL	$1,032,721
NAVY HSG PROJS REQ SECNAV APPROVAL	7,417
CMC PROJS REQ SECNAV APPROVAL	296,880
CMC FAM HSG	3,431
TOTAL	1,340,449
NAVY SECDEF APPROVAL AT CLOSURE SITES	113,018
NAVY SECDEF EUROPE	23,533
NAVY NCR	104,981
NAVY REALIGNMENT SITES	120,855
NAVY LAND ACQ	52,365
CMC SECDEF CLOSURE SITES	11,030
CMC NCR	40,374
CMC LAND ACQ	6,500
CMC JAPAN	306
TOTAL	1,813,411

IMPACTED PROJECTS—Continued

	Cost
CMC DEFERRED	1,400
NAVY DEFERRED	65,737
NAVY NOT REQUIRED	56,010
TOTAL	123,147
SUBTOTAL	1,936,558
WAIVERS/EXEMPTIONS	194,059
SECNAV APPROVED	(291,036)
GRAND TOTAL	1,839,581

UNEXECUTED NAVY PROJECTS (FY87-FY91)

INSIDE UNITED STATES

07-JUNE-91

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
AK	ADAK AK NSGA	1991	075	OPERATIONS BLDG ADDITION	3000
AK	AMCHITKA IS AK FLTSURSPCD	1991	001	ELECTRONIC INSTALLATION	31000
AK	ANCHORAGE AK NRC	1990	130	RESERVE CENTER ACQUISITION	1200
AL	HUNTSVILLE AL NRC	1990	330	RESERVE CENTER ACQUISITION	1052
AL	MOBILE AL NS	1990	018	PHYSICAL FITNESS FACILITY	2220
AL	MOBILE AL NS	1990	024	MESS HALL	880
AZ	YUMA AZ MCAS	1991	441	AVIATION SUPPLY WAREHOUSE	3720
AZ	YUMA AZ MCAS	1990	438	AIRCRFT POWER CHECK PADS	900
AZ	YUMA AZ MCAS	1991	001	INSTALL IRRIGATION SYS	144
CA	CAMP PENDLETON CA MCAS	1991	528	MAINTENANCE HANGAR	8100
CA	CAMP PENDLETON CA MCAS	1990	557	FLIGHT LINE SEC IMPROVES	2100
CA	CAMP PENDLETON CA MCAS	1991	584	CONSTR & WT HNDLG EQP SHOP	4110
CA	CAMP PENDLETON CA MCB	1990	116	FAMILY HOUSING	15000
CA	CAMP PENDLETON CA MCB	1991	864	EXTERIOR IMPROVEMENTS	962
CA	CAMP PENDLETON CA MCB	1990	070	FAMILY HOUSING	10150
CA	CAMP PENDLETON CA MCB	1991	890	FAMILY HOUSING	11805
CA	CAMP PENDLETON CA MCB	1991	229	ELECS COMMS MAINT SHOP	5330
CA	CAMP PENDLETON CA MCB	1991	996	MIL OPS IN URBANIZED TERRN	10860
CA	CAMP PENDLETON CA MCB	1991	977	MESS HALL	3720
CA	CAMP PENDLETON CA MCB	1990	849	OPERATIONS SUPPORT FACS	3250
CA	CAMP PENDLETON CA PHIBTSF	1991	953	LCAC SUPPORT COMPLEX	8470
CA	CHINA LAKE CA NWC	1991	475	WEAPONS TACTICAL TRAINER	990
CA	CHINA LAKE CA NWC	1991	431	ADVANCED WEAPONS LAB	17585
CA	CHINA LAKE CA NWC	1990	369	MSL ENGAGEMENT SIM ARENA	17500
CA	CONCORD CA NWC	1991	292	LAND ACQUISITION	200
CA	CONCORD CA NWS	1990	194	POTABLE WTR SYS IMPVS	3200
CA	CONCORD CA NWS	1990	271	MISSILE INTERGRATION FAC	2440
CA	CORONA CA NWS SEAL BCH AX	1991	171	WEAPONS TEST & EVAL FAC	8870
CA	CORONADO CA NAVPHIBASE	1990	078	OPERATIONAL STRG WAREHSE	4370
CA	EL CENTRO CA NAF	1990	020	BACHELOR ENLISTED QUARTERS	7200
CA	EL TORO CA MCAS	1990	115	FAMILY HOUSING	15000
CA	EL TORO CA MCAS	1990	126	FAMILY HOUSING	25000
CA	EL TORO CA MCAS	1990	125	FAMILY HOUSING	8000
CA	EL TORO CA MCAS	1991	381	DATA PROCESS CNTR	3970
CA	EL TORO CA MCAS	1991	341	HAZ & FLAMMABLE STRHSES	3010
CA	EL TORO CA MCAS	1991	078	INSTALL FENCES	183
CA	EL TORO CA MCAS	1991	878	INSTALL PATIO COVERS	344
CA	LEMOORE CA NAS	1991	888	WEAPONS SCHOOL ADDITION	900
CA	LONG BEACH CA NS	1989	054	FAMILY HOUSING	26110
CA	LONG BEACH CA NS	1991	614	FAMILY HOUSING	25018
CA	LONG BEACH CA NS	1991	201	WHARF UTILITIES UPGRADE	3520
CA	MARE ISLAND CA NS	1991	191	IMPROVEMENTS TO 211 UNITS	394
CA	MIRAMAR CA NAS	1991	270	AIRCRAFT STARTING SYSTEM	1440
CA	MIRAMAR CA NAS	1991	293	CHILD DEVELOPMENT CENTER	2300
CA	MIRAMAR CA NAS	1991	254	TACT AIRC CST TRNG FAC	1250
CA	MOFFETT FLD CA NAS	1990	989	CHILD CARE CENTER	1000
CA	MONTEREY CA FLNUMOCEANCEN	1991	004	METEOROLOGICAL BUILDING	6010
CA	MONTEREY CA NPGS	1991	188	INSTALL BATH EXHAUST FANS	207
CA	MONTEREY CA NPGS	1991	387	INSTALL VANITY CABINETS	267
CA	MONTEREY CA NPGS	1991	146	PUBLIC WORKS COMPLEX	6620
CA	MONTEREY CA NPGS	1991	161	LECT HALL ADD&SEISMIC UPGR	2190

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
CA	NORTH ISLAND CA NAS	1991	573	HIGH EXPLOSIVE MAGAZINES	1510
CA	POINT MUGU CA PMTC	1991	063	SECURTY IMPROVEMENTS	2070
CA	PORT HUENEME CA NCBC	1991	474	ELECTRICAL DIST SYS IMPR	2010
CA	PORT HUENEME CA NSWSES	1991	012	WPN SYS INTEGRATION LAB	10150
CA	SAN BERNADINO CA NMCRC	1990	054	RESERVE TRAINING BUILDILNG	5350
CA	SAN DIEGO CA FCTCP	1991	038	CVN-71 TRAINER	510
CA	SAN DIEGO CA NAR	1990	528	AIRCRAFT MAINT HANGAR	6700
CA	SAN DIEGO CA NAR	1991	550	AIRCRAFT PARKING APRON	3950
CA	SAN DIEGO CA NAVOCNSYSCEN	1991	095	COMBINED RESEARCH LAB	11760
CA	SAN DIEGO CA NS	1990	190	ACCESS ROAD	400
CA	SAN DIEGO CA NSB	1991	099	CHILD DEVELOPMENT CENTER	4130
CA	SAN DIEGO CA NSB	1991	092	OILY WASTE SYSTEM	540
CA	SAN DIEGO CA NSC	1991	086	COLD STORAGE WAREHOUSE	8800
CA	SAN DIEGO CA NTC	1991	191	BARRACKS	5630
CA	SAN DIEGO CA NTC	1990	352	BRIDGE	4800
CA	SAN DIEGO CA NTC	1991	331	RECRUIT SPT CTRAND CHAPEL	5779
CA	SAN DIEGO CA PWC	1991	1588	PATIO COVERS	466
CA	SAN DIEGO CA PWC	1988	096	WASTEWATER SYS IMPVS	5700
CA	SAN DIEGO CA PWC	1991	815	FAMILY HOUSING	7000
CA	SAN DIEGO CA PWC	1991	189	ADD DISHWASHERS & CABINETS	750
CA	SAN DIEGO NS	1991	262R	PIER UPGRADE	7100
CA	SAN DIEGO SPASURRECSTA	1989	010	LAND ACQUISITION	600
CA	SAN FRANCISCO CA PWC	1991	1087	FENCES/CARPORTS/PATIOS	506
CA	SAN FRANCISCO CA PWC	1991	066	SEISMIC REPAIRS	950
CA	SAN FRANCISCO CA PWC	1991	188	FENCES & GARBAGE DISPOSALS	1616
CA	SAN FRANCISCO CA PWC	1990	071	WATER SUPPLY SYSTEM IMPRVS	3550
CA	SEAL BEACH CA NWS	1988	135	MIS FAC ADDN/ALTERS	1970
CA	SKAGGS ISLAND CA NSGA	1991	075	WATER TORAGE TANK	850
CA	TUSTIN CA MCAS	1990	253	FLIGHT LINE SEC IMPRVS	2350
CA	TWENTYNINE PALMS CA MAGCC	1991	470	INDUST WSTWTR TRTMNT FACS	2600
CA	TWENTYNINE PALMS CA MAGCC	1991	447	POTABLE WATER STORAGE TANK	4600
CA	TWENTYNINE PALMS CA MAGCC	1991	428	FIELD MAINTENAMCE SHOP	3620
CA	TWENTYNINE PALMS CA MAGCC	1989	286	CHILD DEVELOPMENT CENTER	1930
CA	TWENTYNINE PALMS CA MAGCC	1990	461	ELEC COMMS MAINT SHOP	1550
CA	VALLEJO CA MARE IS NSY	1990	268	DREDGNG MTRLS HDLG FAC IMP	2700
CA	VALLEJO CA MARE IS NSY	1990	281	CONTROLLED INDUS BLDG ADDN	6300
CT	NEW LONDON CT NAVSUBSCH	1991	398	OPS TRAINER FAC	18990
CT	NEW LONDON CT NSB	1991	392	LAND ACQUISITION	4000
CT	NEW LONDON CT NSB	1991	424	THAMES RIVER DREDGING	8350
CT	NEW LONDON CT NSB	1991	130	BACH OFF QTRS MODERN	5000
CT	NEW LONDON CT NSB	1990	169	BACHELOR ENLISTED QUARTERS	11900
CT	NEW LONDON CT NSB	1991	413	QUAYWALL REPLACEMENT	9150
CT	NEW LONDON CT NUSC	1990	105	ELECTROMAG SYSTEMS LAB	12600
DC	WASHINGTON DC COMNAVDIST	1990	299	STEAM PLANT SYSTEM MODERN	420
DC	WASHINGTON DC NAVOBSY	1990	025	LABORATORY EXPANSION	2500
DC	WASHINGTON DC NRL	1991	131	PAYLOAD FACILITY VAULT	978
DC	WASHINGTON DC NRL	1991	115	ELECTRO-OPTICS RESRCH LAB	9850
FL	CECIL FIELD FL NAS	1990	888	LIGHT ATTACK WEAPONS SCH	900
FL	JACKSONVILLE FL NADEP	1991	616	INDUST WSTWTR TREAT FACS	14670
FL	JACKSONVILLE FL NAS	1991	070	OP STORAGE FACILITY	220
FL	JACKSONVILLE FL NAS	1991	201	FIRE TRAINING FAC	630

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
FL	JACKSONVILLE FL NAS	1991	174	ANTI-SUB WARFARE TRNG FAC	2810
FL	JACKSONVILLE FL NAS	1991	188	WASTEWATER SYSTEM IMPROVES	6330
FL	JACKSONVILLE FL NH	1990	320	BACHELOR ENLISTED QUARTERS	2080
FL	KEY WEST FL NAS	1991	636	CARIBBEAN REG OPS CENTER	4020
FL	KEY WEST FL NAS	1991	620	EOD MOBILE UNIT FAC	3010
FL	MAYPORT FL FTC	1991	168	FIRE FIGHTING TRNG FAC	4300
FL	MAYPORT FL NS	1991	830	POTABLE WTR SYS IMPRVS	4950
FL	ORLANDO FL NTC	1991	205	REPLACE CHAPEL	2100
FL	ORLANDO FL NTC	1990	482	ELECTRONIC TECHNICIAN SCH	14190
FL	ORLANDO FL NTC	1991	200	BARRACKS	10960
FL	PANAMA CITY FL NCSC	1990	361	DEEP SUBMERGENCE LIFE SUPPORT	990
FL	PANAMA CITY FL NCSC	1991	301	COMP/ANALYSIS LAB ADDN	4330
FL	PARRIS ISLAND SC MCRD	1991	118	CLOTHING ISSUE BUILDING	3410
FL	PENSACOLA FL PWC	1991	286	IMPROVE DRAINAGE, 2 UNITS	11
FL	PENSACOLA FL PWC	1991	386	ADD ADDITIONAL BATH, 2 UNITS	21
FL	PENSACOLA FL PWC	1991	111	WTR & SEWER PIPELINES SEP	3460
FL	PENSACOLA FL PWC	1990	109	WASTEWATER TRANSFER SYSTEM	2100
GA	ALBANY GA MCLB	1991	705	INSTALL INSULATION	281
GA	ALBANY GA MCLB	1991	605	INDUST WST TRMT PLNT IMPVS	1360
GA	ALBANY GA MCLB	1990	245	COMBAT VEHICLE MAINT SHOP	1300
GA	ALBANY GA MCLB	1990	310	CALIBRATION EQUIP TEST FAC	3250
GA	ATHENS GA NSCS	1990	992	CHILD CARE CENTER	1000
GA	ATLANTA GA NAS	1990	299	AIRCRAFT WASH RACK	210
GA	ATLANTA GA NAS	1990	328	ALTER B-1101	400
GA	ATLANTA GA NAS	1991	331	AVIONICS SHOP	2800
GA	KINGS BAY GA NSB	1991	191	ACCESS ROAD	900
GA	KINGS BAY GA NSB	1990	436	ORDNANCE OPERATIONS	5330
GA	KINGS BAY GA NSB	1990	437	DREDGING DIKES	6870
GA	KINGS BAY GA NSB	1991	905A	COMMUNITY IMPACT ASSIST	10800
HI	BARKING SANDS HI PMRF	1991	197	FIRE TRAINING FACILITY	500
HI	LUALUALEI HI NAVMAG	1991	001	CONSTRUCT PIER	400
HI	LUALUALEI HI NM	1991	117	ELECTR DIST LINES RELOC	1660
HI	PEARL HARBOR HI COMOCSYS	1991	417	SURTASS SUPPORT CENTER	12780
HI	PEARL HARBOR HI NSB	1990	116	GEN PURPOSE BERTHING WHARF	18600
HI	PEARL HARBOR HI NSB	1991	114	ELEC DIST SYS IMPROVES	2010
HI	PEARL HARBOR HI PWC	1991	504	AUTO VEHICLE MAINT SHOP	6940
HI	PEARL HARBOR HI WESTOCEAN	1991	005	UNINTERRUPTIBLE POWER SUP	270
HI	WAHIAWA HI NCAMSEPAC	1990	151	COMMS CTR SECURITY IMPVS	8000
IL	DECATUR IL NRC	1990	079	RESERVE CENTER ACQUISITION	1000
IL	GLENVIEW IL NAS	1991	140	AIMD BUILDING	10400
IL	GLENVIEW IL NAS	1991	148	RELOCATE TX/RX BUILDING	670
IL	GRANITE CITY IL RNCFSU4	1987	043	DRILL SITE	390
IL	GREAT LAKES IL NTC	1991	471	FIREMAN APPRENTICE TRG SCH	2170
IL	GREAT LAKES IL PWC	1991	534	TRANSPORTATION FAC	4500
IL	GREAT LAKES IL PWC	1991	378	STORM SEWER SYSTEM IMPRVS	700
IL	PEORIA IL NMCRC	1991	077	RESERVE CENTER ADDITION	800
IL	ROCK ISLAND IL NMCRC	1991	076	RESERVE CENTER ADDITION	3200
IN	CRANE IN NAVWPNSUPPCEN	1991	224	ELECS COMMS MAINT SHOP	7700
IN	CRANE IN NAVWPNSUPPCEN	1990	217	BATTERY TEST FACILITY	4000
IN	CRANE IN NAVWPNSUPPCEN	1991	244	MECHANIZED MTRLS MGMT FAC	4170
IN	CRANE IN NAVWPNSUPPCEN	1991	225	TEST & EVALUATION FAC	1650

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
IN	TERRE HAUTE IN NRC	1991	019	RESERVE CENTER ADDITION	620
KY	FRANKFURT KY NRC	1990	577	RESERVE CENTER ADDITION	225
KY	LOUISVILLE KY NOS	1991	215	PHALANX SHOP MODERNIZATION	5660
LA	MONROE LA NRC	1991	083	RES CEN ADDITION	250
LA	NEW ORLEANS LA NAS	1991	382	AVIONICS BUILDING	3200
LA	NEW ORLEANS LA NAS	1991	420	HANGAR/APRON	13100
LA	NEW ORLEANS LA NSA	1990	098	SMALL BOAT BREAKWATER	170
LA	NEW ORLEANS LA NSA	1990	093	NRPC REHAB	260
MA	SO WEYMOUTH MA NAS	1991	059	FIRE STATION	780
MA	SO WEYMOUTH MA NAS	1990	173	CONTROL TOWER FACILITY	2350
MD	BETHESDA MD NATNAVMEDCEN	1991	912	BACHELOR ENLISTED QUARTERS	9040
MD	INDIAN HD MD NAVEODTECHCT	1990	034	ORD COUNTERMEASURES LAB	7700
MD	INDIAN HEAD MD NOS	1990	059	MIX, CAST, CURE FAC	10670
MD	INDIAN HEAD MD NOS	1991	068	CHEM/TOXICOLOGY LAB REPL	6000
MD	PATUXENT RIVER MD NATC	1991	420	SECURITY IMPROVEMENTS	3010
MD	PATUXENT RIVER MD NATC	1991	463	NORTH GATE ROAD	2000
MD	ST INIGOES MD NAVELEXSYS	1991	723	FACSFAC ELEC SYS INTEG	4020
MD	ST INIGOES MD NAVELEXSYS	1990	719	UTILITIES IMPVS (INCR II)	2950
MD	SUITLAND MD NAVINTCOM HQ	1991	001A	HEADQUARTERS BLDG-INCR II	55048
ME	BANGOR ME NRC	1991	001	RESERVE TRAINING BUILDING	1815
ME	WINTER HARBOR ME NSGA	1991	790	CONSTRUCT ACCESS ROAD	103
MI	DETROIT MI NAF	1990	038	RESERVE CENTER REHAB	1000
MO	KANSAS CITY MO MARFINCEN	1990	001	FIN & DATA PROC CTR-INCR 1	10000
MO	KANSAS CITY MO MCFC	1991	802	INSTALL SIDEWALKS	190
MO	ST LOUIS MO NMCRC	1990	075	RESERVE CENTER ADDITION	2200
MS	GULFPORT MS CBC	1990	190	ACCESS ROAD	1150
MS	MERIDIAN MS NAS	1987	169	AIRFIELD PAVEMENT	3170
MS	MERIDIAN MS NAS	1991	191	ACCESS ROAD	817
MS	MERIDIAN MS NAS	1990	266	AIRCRAFT MAINT FACS	11800
MS	PASCAGOULA MS NS	1989	009	ENLISTED MESS	400
MS	PASCAGOULA MS NS	1989	012	SECURITY FACILITY	1000
MS	PASCAGOULA MS NS	1990	017	PHYSICAL FITNESS FACILITY	2220
MS	PASCAGOULA MS NS	1990	013	GENERAL WAREHOUSE	1110
MS	PASCAGOULA MS NS	1990	008	BACHELOR ENLISTED QTRS	3940
MS	PASCAGOULA MS NS	1990	019	MAGAZINES	3140
NC	CAMP LEJEUNE NC MCB	1991	003	MOBILE HOME SPACES	780
NC	CAMP LEJEUNE NC MCB	1990	808	PARKING FAC	547
NC	CAMP LEJEUNE NC MCB	1990	663	MESS HALL	5410
NC	CAMP LEJEUNE NC MCB	1991	679	ELECS COMMS MAINT SHOPS	4120
NC	CAMP LEJEUNE NC MCB	1990	644	ELEC COMM MAINT SHOP	7200
NC	CAMP LEJEUNE NC MCB	1990	229	ELEC COMMS MAINT SHOP	4200
NC	CAMP LEJEUNE NC MCB	1991	804	FIELD MAINTENANCE COMPLEX	21000
NC	CAMP LEJEUNE NC MCB	1991	810	MECHANICS TRG BDG-INCR III	4050
NC	CARTERET COUNTY NC	1990	999	ACCESS ROADS	5500
NC	CHARLOTTE NC NMCRC	1990	314	RESERVE CENTER ACQUISITION	4170
NC	CHERRY POINT NC MCAS	1990	029	LAND ACQUISITION	625
NC	CHERRY POINT NC MCAS	1989	089A	LAND ACQUISITION	2150
NC	CHERRY POINT NC MCAS	1991	062	AV8B NIGHT ATTACK WEAPON TRAIN	950
NC	CHERRY POINT NC MCAS	1989	032	FORWARD TRNG AREA	8280
NC	CHERRY POINT NC MCAS	1988	029	LAND ACQUISITION	2200
NC	CHERRY POINT NC MCAS	1990	821	APPLIED INSTR FACILITIES	5350

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
NC	CHERRY POINT NC MCAS	1991	017	WATER TREATMENT FACILITY	12000
NC	CHERRY POINT NC MCAS	1989	872	BEQ	16910
NC	CHERRY POINT NC MCAS	1991	883	REGIMENTAL GROUP HEADQTRS	1950
NC	NEW RIVER NC MCAS	1990	525	AVIATION MAINT TRNG BLDG	6000
NC	NEW RIVER NC MCAS	1990	543	MAINT HANGAR ADDITIONS	5200
NC	NEW RIVER NC MCAS	1990	496	FLIGHT LINE SECURITY IMPRS	2500
NC	NEW RIVER NC MCAS	1990	520	OPERATIONAL TRNR FAC	7400
NJ	EARLE NJ NWS	1991	949	TRESTLES REPL (PHASE I)	20100
NV	FALLON NV NAS	1991	196	FAMILY HOUSING	10500
NV	FALLON NV NAS	1991	300	SECURITY FENCES	830
NV	FALLON NV NAS	1987	277	LAND ACQUISITION	6400
NV	FALLON NV NAS	1991	294	RANGE AIR SURVEILLANCE SYSTEM	770
NV	FALLON NV NAS	1991	301	FIRE FIGHT TRAIN FAC	700
NY	GARDEN CITY NY MCRC	1990	505	CVMF	400
NY	NEW YORK NY NAVSTA	1990	092	BACHELOR ENLISTED QUARTERS	4600
NY	NEW YORK NY NAVSTA	1991	118R	POLICE STATION	1200
NY	NEW YORK NY NAVSTA	1990	091	CHILD CARE CENTER	3000
NY	NEW YORK NY NAVSTA	1991	122R	COMMUNITY FACILITIES	7100
NY	NEW YORK NY NAVSTA	1991	117R	BASE HEADQTRS/ADMIN BLDG	10800
NY	NEW YORK NY NAVSTA	1991	110R	AUTOMOTIVE HOBBY SHOP	640
NY	NEW YORK NY NS	1988	085	LAND ACQUISITION	5700
NY	NEW YORK NY NS	1990	093	LAND ACQUISITION	3000
NY	STEWART AFB NY AFRC	1990	522	BEQ	3800
NY	STEWART AFB NY AFRC	1990	523	FUEL SYS MAINT FAC	5700
NY	STEWART AFB NY AFRC	1990	521	SUPPLY SUPPORT FAC	1820
OH	CINCINNATI OH NMCRC	1991	554	RESERVE CENTER ADDITION	1200
OH	COLUMBUS OH NMCRC	1991	576	VHF-CHB	350
PA	HARRISBURG PA AFRC	1991	551	RESERVE CENTER ADDITION	2400
PA	PHILADELPHIA PA NSY	1990	578	HAZ & FLAMM STOREHOUSE	10000
PA	WARMINSTER PA NADC	1991	163	A/C TECHNOLOGIES LAB	10770
PA	WILLOW GROVE PA NAS	1991	213	GSE SHED	1220
RI	NEWPORT RI NAVUWSYSCEN	1991	031	ADV UNDERWTR WPNS RES LAB	13700
RI	NEWPORT RI NETC	1991	407	CHILD DEVELOPMENT CENTER	1200
RI	NEWPORT RI NETC	1991	146	STEAM DISTR SYSTEM UPGRADE	6230
RI	NEWPORT RI NUSC	1991	055	MK-48 NOSE ARRAY TEST FAC	800
RI	NEWPORT RI NUSC	1991	054	HIGH ENERGY TEST FACILITY	930
SC	BEAUFORT SC MCAS	1989	089	LAND ACQUISITION	2150
SC	BEAUFORT SC MCAS	1989	089	LAND ACQUISITION	529
SC	BEAUFORT SC MCAS	1991	366	BACHELOR ENLISTED QUARTERS	6700
SC	CHARLESTON SC NS	1990	861H	MARINA	3100
SC	CHARLESTON SC NS	1990	937H	MILITARY SUPPORT FACS	2700
SC	CHARLESTON SC NS	1990	646H	FLT OPERS CONTROL BLDG	1250
SC	CHARLESTON SC NS	1991	747	PASS OFFICE ADDITION	720
SC	CHARLESTON SC NSY	1990	761H	PUBLIC WORKS FACILITY	7900
SC	CHARLESTON SC NSY	1990	932H	INDUST LOGISTICS FAC	7800
SC	CHARLESTON SC NWS	1990	190	ACCESS ROAD	3000
SC	CHARLESTON SC NWS	1991	784	MISSILE MAGAZINE	1910
SC	GULFPORT MS NAVCONSTRACEN	1991	716	APPLIED INST BLDG	1170
SC	GULFPORT MS NAVCONSTRACEN	1991	723	BARRACKS	7540
TN	MEMPHIS TN NAS	1991	585	STREET WIDENING	40
TX	CORPUS CHRISTI TX NAS	1989	089	LAND ACQUISITION	520

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
TX	CORPUS CHRISTI TX NAS	1989	089	LAND ACQUISITION	4765
TX	DALLAS TX NAS	1991	355	COMM FACILITY	400
TX	DALLAS TX NAS	1991	319	LOX/NIT FAC	650
TX	DALLAS TX NAS	1991	208	GSE SHOP	1640
TX	HOUSTON TX NMCRC	1991	065	RESERVE CENTER ADDITION	3600
TX	INGLESIDE TX NS	1989	016	PORT OPS FACILITY	540
TX	INGLESIDE TX NS	1989	012	BASE FIRE ALARM SYSTEM	200
TX	INGLESIDE TX NS	1990	030	MAGAZINES	910
TX	INGLESIDE TX NS	1990	023	PHYSICAL FITNESS FACILITY	4870
TX	INGLESIDE TX NS	1990	021	GENERAL WAREHOUSE	4300
TX	INGLESIDE TX NS	1990	025	BACHELOR ENLISTED QUARTERS	6200
TX	INGLESIDE TX NS	1990	019	EXPLOSIVE ORD DISPOSAL FAC	1000
TX	INGLESIDE TX NS	1990	035R	UTIL & SITE IMPRV PH II	3800
TX	INGLESIDE TX NS	1990	022	PUBLIC WORKS COMPLEX	2440
TX	KINGSVILLE TX NAS	1990	124	FAMILY HOUSING	140
TX	LACKLAND AFB TX TECHTRNG	1991	002	BACHELOR ENLISTED QUARTERS	11850
TX	LACKLAND AFB TX TECHTRNG	1990	001	SECURITY TRAINING CTR	4500
UK	LONDON UK CINCUSNAVEUR	1991	102	UGRADE CINCUSNAVEUR HVAC	930
VA	ARLINGTON VA HQMC	1991	006	LOGISTICS SUPPORT FAC	2810
VA	DAHLGREN VA NAVSPASURSYS	1991	249	SPACE SURVEILLANCE CTR	9850
VA	DAHLGREN VA SURWARFARECTR	1990	996	CHILD CARE CENTER	1000
VA	DAM NECK VA FCDSSACT	1991	983	COMPUTER PROG OPS CTR ADDN	6500
VA	FORT BELVOIR RNMCB 23	1991	053	OP STORAGE FACILITY	175
VA	LITTLE CREEK VA NAB	1991	288	FAMILY HOUSING OFFICE	372
VA	LITTLE CREEK VA NAVPHIBASE	1990	368	LAND ACQUISITION	1300
VA	LITTLE CREEK VA NAVPHIBSE	1991	418	SURTASS SUPPORT CENTER ADN	8010
VA	LITTLE CREEK VA NAVPHIBSE	1991	337	LCAC COMPLEX (INCR II)	12460
VA	LITTLE CREEK VA NAVPHIBSE	1991	618	SMALL ARMS RANGE	2400
VA	LITTLE CREEK VA PHIBSCOL	1991	360	TRAINING MATERIALS STORAGE	800
VA	LITTLE CREEK VA PHIBSCOL	1991	366	LCAC TRAINING FAC	1800
VA	NORFOLK VA FTC	1991	180	FIRE FIGHTING TRAIN FAC	16080
VA	NORFOLK VA NAR	1991	633	HM-18 HANGAR	7300
VA	NORFOLK VA NS	1991	834	ELECTRIC POWER UPGRADE	10950
VA	NORFOLK VA PWC	1991	885	DOORS & WINDOW LOCKS 257 UNIT	189
VA	NORFOLK VA PWC	1991	687	LANDSCAPING, 114 UNITS	54
VA	NORFOLK VA PWC	1991	685	DOORS & WINDOW LOCKS 225 UNIT	191
VA	NORFOLK VA PWC	1991	487	LANDSCAPING, 609 UNITS	431
VA	NORFOLK VA PWC	1991	287	INSTALL FIRE WALLS, 12 UNITS	65
VA	NORFOLK VA PWC	1991	340	COMMUNITY CENTER	417
VA	NORFOLK VA PWC	1991	236	FUEL LINE	4020
VA	OCEANA VA NAS	1991	178	WEAPONS SYS TRNR BLDG ADDN	3670
VA	PORTSMOUTH VA NORFOLK NSY	1991	407	WATRFRT SERVICE SUPPT BLDG	14600
VA	QUANTICO VA MCCOMBDEV CMD	1991	402	COMBAT DEVELOPMENT CENTER	16094
VA	QUANTICO VA MCCOMBDEV CMD	1990	375	COM OFFICERS SCHOOL ADDN	3450
VA	QUANTICO VA MCCOMBDEV CMD	1991	430	MARINECORPS ACAD RESCH LIB	14150
VA	QUANTICO VA MCCOMBDEV CMD	1991	906	INSTALL INSULATION	1400
VA	QUANTICO VA MCCOMBDEV CMD	1991	408	MIL OPS IN URBANIZED TERRN	3870
VA	QUANTICO VA NRL ANNEX	1991	148	MIDWAY RESEARCH CTR UPGRDE	2600
VA	WALLOPS ISLAND VA AEGIS	1991	327	AEGIS CMD & LIFE SUPT FAC	5490
VT	BURLINGTON VT NRC	1991	530	RESERVE TRAINING BUILDING	2500
WA	BANGOR WA NSB	1991	099	EXPAND SUBGRU 9 OPCON	550

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
WA	BANGOR WA TRIDENT REFITFA	1991	050	HAZAR & FLAMM STOREHOUSE	2110
WA	BANGOR WA TRIDENT REFITFA	1991	057	CRANE TRACKAGE EXTENSION	910
WA	BANGOR WA TRIDENT TRAFAC	1991	993	FIRE FIGHTING TRAINING FAC	3610
WA	BREMERTON PUGETSND WA NS	1991	800	TECHNOLOGY D[illegible] SYS	640
WA	BREMERTON PUGETSND WA NSC	1990	083	EMERGENCY GENERATORS	690
WA	BREMERTON PUGETSND WA NSY	1991	274	LAND ACQUISITION	20000
WA	BREMERTON PUGETSND WA NSY	1990	254	DRY DOCK 2 SUPERFLOODING	1000
WA	BREMERTON PUGETSND WA NSY	1990	620	INDUST SPT COMPLEX - INC I	18900
WA	BREMERTON PUGETSND WA NSY	1991	252	DRY DOCK UTILITIES UPGRADE	2000
WA	BREMERTON WA NAVHOSP	1990	016	BACHELOR ENLISTED QUARTERS	1000
WA	EVERETT WA NAVAL STATION	1991	145	COMMUNICATION FACILITY	1660
WA	EVERETT WA NAVAL STATION	1991	300R	LAND ACQUISITION	11200
WA	EVERETT WA NAVAL STATION	1991	104R	LOGISTICS COMPLEX	10680
WA	EVERETT WA NAVAL STATION	1991	117	SECURITY & FIRE STATION	1760
WA	EVERETT WA NAVAL STATION	1991	082	UTILITIES AND SITE IMPROVS	3070
WA	EVERETT WA NAVAL STATION	1991	302R	FLEET HQ SUPPORT	6200
WA	EVERETT WA NAVAL STATION	1991	089	CARRIER SUPPORT	15777
WA	EVERETT WA NAVAL STATION	1991	312R	PORT SERVICES BLDG ADDN	1900
WA	EVERETT WA NS	1989	109	CARRIER SUPT COMPLEX (INCR IV)	9650
WA	KEYPORT WA USEAWARENGSTA	1990	752	BEQ MODERNIZATION	1850
WA	KEYPORT WA USEAWARENGSTA	1991	295	AUTOMATED MATRLS HDLG FAC	7340
WA	KEYPORT WA USEAWARENGSTA	1990	292	USEAWARENG CTR	10400
WA	KEYPORT WA USEAWARENGSTA	1991	337	SUB WPNS SYSTEMS SHOP	10150
WA	KEYPORT WA USEAWARENGSTA	1991	309	FIRE STATION	1100
WA	OAK HARBOR WA NAVHOSP	1991	007	AVIAT PHYSIOLOGY TRG FAC	2180
WA	OSO JIM CREEK WA NRS	1990	070	STAND-BY GENERATOR PLANT	1200
WA	SILVERDALE WA STRATWEPFAC	1991	806	ENGINEERING SERVICES BLDG	3520
WA	SILVERDALE WA STRATWEPFAC	1991	957	TRANSFER FACILITY ADDITION	3520
WA	SILVERDALE WA STRATWEPFAC	1991	807	RADIOGRAPHIC INSPEC BLDG	13870
WA	SILVERDALE WA STRATWEPFAC	1991	943	MAGAZINE MODIFICATIONS	800
WA	SILVERDALE WA STRATWEPFAC	1991	809	MOTOR INSPECTION BUILDING	6630
WA	SILVERDALE WA STRATWEPFAC	1991	808	UTILS & SITE IMPROVEMENTS	11060
WA	SILVERDALE WA STRATWEPFAC	1991	935	TRAINING FACILITY ADDITION	9740
WA	SILVERDALE WA STRATWEPFAC	1991	937	MISSILE ASSEMBLY BLDG	7340
WA	WHIDBEY IS WA NAS	1989	032	A/C INTER MAINT FAC	8370
WA	WHIDBEY ISLAND WA NF	1991	030	ELECTRIC PWR IMPROVES	1750
				TOTAL	1654448

OUTSIDE UNITED STATES

ST	ACTIVITY	FY	PN	DESCRIPTION	COST
AC	ANTIGUA NSF	1989	017	NAV SUPT FAC UPGRADE	6470
AU	HAROLD E HOLT AUST NCS	1990	205	FIRE PROTECTION SYSTEM	610
CR	SOUDA BAY CRETE NSA	1991	722	DINING FACILITY EXPANSION	550
CU	GUANTANAMO BAY CU NS	1991	803	FAMILY HOUSING	18409
CU	GUANTANAMO BAY CU NS	1990	123	FAMILY HOUSING	15000
GU	AGANA GUAM NAS	1991	200	VQ-5 FACILITES	530
GU	CAMP COVINGTON GUAM MCB	1990	378	MESS HALL	4300
GU	GUAM NAVMAG	1990	816	MK-48 TORPEDO	790
GU	GUAM NAVMAG	1991	809	TOMAHAWK SUPPORT COMPLEX	9319
IC	KEFLAVIK IC NAS	1991	387	FIRE HAZARD CEILINGS, 224 UNIT	1142
IC	KEFLAVIK IC NAS	1991	287	FIRE HAZARD CEILINGS, 130 UNIT	964
IC	KEFLAVIK ICELAND NAS	1991	463	FUEL FACILITIES	2440
IC	KEFLAVIK ICELAND NCS	1990	568	COMMUNICATIONS ANTENNA	7760
IT	LA MADDALENA IT NSO	1988	100	COLD IRON UTIL SUPPORT	7480
IT	NAPLES IT NSA	1990	126B	CMD CTL CMS&INTEL CX-IN II	46600
IT	SICILY IT NAVCOMMSTA	1991	305	RECEIVER FACILITY	1513
IT	SIGONELLA ITALY NAS	1991	218	CORROSION CTRL HANGAR	8390
JA	IWAKUNI JA MCAS	1991	887	INSTALL CARPET	254
JA	IWAKUNI JA MCAS	1991	220	A/C CHILLER	52
JA	KAMISEYA JA NCS	1991	287	CONSTRUCT CARPORTS	607
JA	SASEBO JA CFA	1991	289	FACILITIES IMP (230 UNITS)	936
JA	YOKOSUKA JA PWC	1991	790	INSTALL CHILLER UNITS	206
PR	ROOSEVELT RDS PR NCS	1990	320H	COMMUNICATIONS CTR ADDN	1250
PR	ROOSEVELT RDS PR NS	1990	190	ACCESS ROAD	1260
PR	ROOSEVELT RDS PR NS	1990	311H	OPEN MESS STORAGE	1100
PR	ROOSEVELT RDS PR NS	1990	307H	BANK	900
PR	ROOSEVELT RDS PR NS	1990	889H	EX SERV STA/MINI-MART	2880
PR	ROOSEVELT RDS PR NS	1990	305H	DENTAL CLINIC	5200
PR	ROOSEVELT RDS PR NS	1990	304H	SUPPLY WAREHOUSES	2100
PR	ROOSEVELT RDS PR NS	1990	301H	FUEL MOORING FACILITY	10300
PR	ROOSEVELT RDS PR NS	1990	313H	MILITARY SUPPORT STORAGE	840
PR	ROOSEVELT RDS PR NS	1990	315H	BOAT HOUSE	3450
PR	ROOSEVELT RDS PR NS	1990	314H	CHAPEL	3100
PR	ROOSEVELT RDS PR NS	1990	300H	AIR CARGO TERMINAL	1550
PR	ROOSEVELT RDS PR NS	1990	306H	CONTROLLED HUMIDITY WHSE	1300
PR	ROOSEVELT RDS PR NS	1990	303H	PRINTING PLNT (ROOS RDS)	1450
PR	ROOSEVELT RDS PR WPNTRFAC	1990	319H	RANGE OPS CTR (ST CROIX)	6500
PR	ROOSEVELT RDS PR WPNTRFAC	1990	317H	RANGE OPERATIONS STORAGE	480
PR	ROOSEVELT RDS PR WPNTRFAC	1990	318H	RGE OPS BLDG STRG(VIEQUES)	260
PR	VIEQUES WEST AMMO FAC	1990	316H	PUB WKS STRG (VIEQUES)	620
SC	EDZELL SCOTLAND NSGA	1991	069	CLASSIC OWL	935
SP	ROTA SPAIN NCS	1991	556	OPS BUILDING ADDITION	1105
SP	ROTA SPAIN NS	1991	539	WATER BLADDER	881
VI	ST CROIX VI HAMS BLUFF	1990	046H	SONOBUOY QUAL ASSURANCELAB	2350
ZV	Z/NATO INFRASTRUCTURE	1991	091	HOST NATION INFRASTR SPT	1000
				TOTAL	185133
				GRAND TOTAL	1839581

OVERSEAS BASES

Senator DIXON. Miss Schafer, for a number of years, the Congress has been interested in the Navy's plans to modernize its operational and support facilities in Naples. In light of the changing force structure, can you update us on the Navy's plans in this area? What, in your view, are the operational and economic tradeoffs in developing alternative approaches to improve the quality of life of U.S. military personnel stationed in Naples?

Miss SCHAFER. The Navy proposed relocation from Agnano in 1986 after seismic action in 1985 damaged the leased facilities. Geologic and engineering studies indicated that a continuing seismic/volcanic threat exists at Agnano; and that the existing facilities, particularly the high-rise, could not be economically reinforced to prevent seismic damage, nor be protected from volcanic actions. Any replacement facilities built at Agnano would also be subject to volcanic action. This unavoidable threat to life safety and potential curtailment of the critical operational C3I mission was the basis for the decision to relocate to a safe site.

Based on a regional relocation siting study, the Navy proposed relocation to Capua on land to be provided by Italy. However, this plan was abandoned in 1988 after Ministry of Defense (MOD) Italy was unable to obtain the site. The next preferable alternative was relocation of all operational functions to the Navy controlled portion of Capodichino Airport, which is outside the zone affected by seismic/volcanic action, and relocation of housing and community facilities to a support site within a 45-minute commute of Capodichino. A lease-construct option is being pursued for the support site.

The Navy's force structure in the Mediterranean, and particularly Naples, is not projected to be reduced to a level that would require a revision of the above plans. We have sized our facilities to accommodate our best projection of the force levels they will serve.

Although the economic aspects of the Naples improvement initiative have been carefully considered, the first goal is to provide safe facilities for our people. The second is to do this at reasonable cost. Construction and operation of U.S.-owned facilities is normally more cost effective than continued short-term leasing.

Since the Capua land was not made available, our approach is to construct the operational facilities over which we need maximum control at Capodichino, and to lease housing and support facilities. Construction of facilities of an operational nature reduces our requirement for leasing and produces a mid-term economic payback. The cost of leasing new housing and support facilities at a common site should be comparable on a square foot basis with the renegotiation of existing leases, and significantly enhance the quality of life for our people. We will incur increased cost for leasing additional housing units and properly sized and outfitted support facilities, schools and hospital. We will also assume one-time cost associated with relocation. Ultimately, however, these costs must be confronted because we must remain in Naples, and we must provide safe, secure and quality facilities for our people.

As of June 1991, the fiscal year 1989 Milcon Program for Capodichino including a BEQ, Utilities, Fire/Security Building and East Parking Garage is under construction. The fiscal year 1990 Milcon Program which includes the C31 Building, Administration Building, and West Parking Garage is in final negotiations with three potential construction contractors. The fiscal year 1992 Milcon Program includes a project to complete the utilities system upgrade for Capodichino. A Request for Proposals for Phase I of the Support Site is complete and will be advertised upon award of the C3I contract. Phase I includes the Support Site land, 250 family housing units, dependent schools and recreation.

Senator DIXON. In your personal view, do you believe that the 1993 construction request is adequate to meet the services facility needs?

Mr. BOATRIGHT. We understand fiscal realities and support the decision of the Secretary of Defense to institute a Milcon pause in fiscal year 1993 as a way to reduce expenditures and meet the budgetary ceilings worked out in agreement with the Congress. The military instruction program should share the burden of budget cuts together with other programs. Based on an assessment of our facility inventory, which has an average age of 40 years, we have an annual requirement for at least $750 million to revitalize the deteriorated facilities in which our people live and work, to upgrade our utility infrastructure, and to correct environmental deficiencies. When budget restraints require reduced requests, it is not possible to accomplish a prudent amount of facility revitalization. Past experience has proven that good facilities have a favorable effect on recruitment, retention and morale, and that poor facilities have the opposite effect. It is not possible at this time to predict the exact impact the fiscal year 1993 Milcon pause will have on these factors, but we expect historical trends to continue.

We understand the Milcon pause is a one-time measure required to meet budgetary ceilings, and therefore we anticipate that there will be a return to normal funding levels for Milcon the next year. We are very concerned, however, that the steep increase that will be required in fiscal year 1994 to return Milcon to normal funding levels might provide a lucrative target for "ramp managers." We will work very hard with the Milcon Subcommittees and their staffs to provide justification to support our requests that is based on actual recuirements rather than a previous year's baseline. If future funding does not rise to normal levels, we would expect very serious adverse effects on recruitment, retention and morale.

FAMILY HOUSING MAINTENANCE AND REPAIR

Senator DIXON. Could you provide an estimate of the additive funds needed in fiscal year 1992 and fiscal year 1993 to stabilize your level of deferred family housing maintenance and repair?

Mr. BOATRIGHT. We can execute an additional $100 million in maintenance and repair (M&R) funds in fiscal year 1992 and fiscal year 1993 to level off the deferred backlog. This additive of M&R funds over the next 2 years would provide the needed up front dollars to reduce the deferred M&R to an acceptable level. As housing units continue to age, the M&R funds level would require another assessment in 10 years. A more desirable alternative, consistent with Air Force policy, would be to provide funds to accomplish whole house improvements in conjunction with maintenance and repair. Since 68 percent of the cost of a whole house improvement project is for M&R, a funding level of $147 million of improvement funds per year would achieve the same effect on the deferred M&R.

FAMILY HOUSING CONSTRUCTION (CASTLE AFB)

Senator **Dixon**. In your testimony you refer to Air Force plans to pursue construction of new family housing at Castle AFB even though the base has been recommended for closure. Can you please explain the basis of this request.

Mr. **Boatright**. The Air Force's fiscal year 1992 President's budget was prepared prior to the Secretary of Defense's recommended base closure announcements on April 12, 1991. The testimony included new replacement family housing construction at Castle since it was a part of the fiscal year 1992 President's budget and because the Closure Commission will not issue its position on which bases will actually close until late July 1991. If Castle AFB is approved for closure by the Commission, the President and Congress, we will not require this replacement project. The Air Force still, however, has an urgent need to replace or improve our aged housing inventory. We recommend the funds requested for the Castle replacement housing be used to alleviate the Air Force's backlog in housing requirements. We can identify a substitute project for construction of replacement housing at March AFB, CA. The authorization and appropriation of $10.5 million could be applied to the March AFB project or you could increase our improvements or maintenance accounts by $10.5 million to reduce our general backlog of housing needs.

Senator **Dixon**. From the point of view of your installation commanders and major commands, do you believe that the transfer of most repair and minor construction funding into the military construction account will enhance flexibility and improve the level of facility investment? In your personal view, is this a step toward local autonomy and innovation?

Mr. **Boatright**. The transfer of real property maintenance funding for major repair and all minor construction projects from the O&M and RDT&E appropriations to the Milcon appropriation will significantly reduce the flexibility of the installation commanders and the major commands to support facility investments.

Installation commanders must have the flexibility to react to changing priorities, unexpected requirements, emergencies, mission changes and unforeseen failures. Presently, installation commanders use O&M funds for the majority of their day-today operation, to include maintenance, repair and minor construction (below $200,000). Moving the majority of this money into the Milcon appropriation, for which no flexibility to augment the account exists at installation level, is considered by our commanders as a significant constraint on their flexibility.

The proposed transfer does not enhance local autonomy nor is it an innovative approach to facility investment. In fact, when the Military Construction Codification Act was under consideration by the Congress in 1982, a proposal was made to include all minor construction in the Milcon account. According to this committee's own report to that legislation, the proposal was rejected because it would have eliminated essential management flexibility of the installation commander. The facts that led to that conclusion are the same today as they were then.

When the Department is facing constrained budgets, force structure reductions and base closings, it is imperative that installation commanders be provided the maximum amount of management flexibility to fulfill their missions. Any additional administrative requirement to provide line-item review of O&M projects transferring to the Milcon appropriation would create a new bureaucracy to manage the enormous amount of paperwork required. This micro-management adds no value whatsoever and would encumber our own management efforts to streamline and downsize our management activities.

The facility success the Air Force enjoys is strictly predicated on the commitment of the installation commanders to invest in the physical plant. In my opinion, this transfer severely constrains their flexibility, and is a considerable step backward.

Senator **Dixon**. What changes to the administration budget request—either in the area of base closure or in specific facility construction—are necessary in light of Secretary Cheney's base closure and realignment proposals?

Mr. **Boatright**. Two projects, requested to support the beddown of the F-117A aircraft at Holloman AFB, New Mexico, are no longer required. The $5.1 million Add to and Alter Aircraft Maintenance Complex project included in the fiscal year 1992 President's budget and the $2.6 million Avionics Facility, authorized and appropriated in 1991, would have been needed to permit moving the base's F-15 aircraft from one side of the base to the other. Retirement of the F-15s eliminates these requirements.

With the upcoming base closure and realignment decisions, the entire military construction program will be reviewed and appropriate determinations will be made on individual projects affected by base and force structure changes.

Senator DIXON. Now that the Secretary's closure and realignment list has been released, can you advise the number and value of projects which have yet to be released either by the Office of the Secretary of Defense or by the service Secretary? For the record, please provide a list of all such projects and the reasons why they have not been released for execution.

Mr. BOATRIGHT. In his April 10, 1991 memorandum, the Deputy Secretary of Defense requested we continue to exercise careful stewardship of limited military construction resources. He directed that only projects that are consistent with the force structure plans and necessary for effective accomplishment of the DOD mission be approved for continued execution. In the interest of continuing with only wise capital investments, all projects requested for construction contract award between now and September 30, 1991 are being carefully scrutinized in light of current force structure changes. As of May 31, 1991, 40 projects valued at $200 million have been released for award by the Secretary of the Air Force, 14 more projects valued at $28.7 million are awaiting Deputy Secretary of Defense approval, and 191 projects valued at $750 million are at the various levels of coordination required prior to obtaining Secretary of Defense approval.

Senator DIXON. In your testimony, you state that the Air Force has increased its emphasis on burdensharing. How has the level of host nation support differed in response to this new emphasis? Are we in fact, receiving higher levels of host nation support?

Mr. BOATRIGHT. I should mention that any increase in host nation funding is not the result of unilateral Air Force action, but is instead that of efforts at the joint services level. In one area, the Republic of Korea (ROK), the services are receiving higher levels of host nation support for military construction. Starting in calendar year 1991, the ROK Government has agreed to provide additional host nation funding to include environmental and quality of life projects.

Although Europe has not yet seen a similar increase in the military construction area, host nation funding levels have remained steady.

Senator DIXON. In light of the acknowledged reduction in the threat of a strategic attack from the Soviet Union—an assessment acknowledged in the elimination of the continuous airborne command and control flights and public consideration of reduction or elimination of strategic bomber alert—what is the rationale to continue funding the joint U.S./Canadian dispersed operating base program?

Mr. BOATRIGHT. Although the perceived strategic threat from the Soviet Union has diminished, the Soviet Union remains the only nation capable of destroying the United States, and for the foreseeable future the Soviets will retain the capability to deliver thousands of nuclear warheads against our Nation. In recognition of these facts, we strongly believe the Forward Operating Locations and Dispersed Operating Bases remain valid NORAD operational requirements. In addition, under the terms of the bilateral Memorandum of Understanding on the Modernization of the North American Air Defense System, the Government of Canada has awarded contracts for the upgrading of these bases. The United States has made a commitment to pay its share.

Senator DIXON. In the report accompanying the Senate's National Defense Authorization bill last year, this committee requested that the full beddown of each new weapons system be provided to the committee when the first increment of Milcon for the system is requested. For the record, please provide this basing information for the planned deployment of the complete B-2 system.

Mr. BOATRIGHT. The B-2 is planned for beddown at two operating locations—Whiteman AFB, Missouri and a second base. Depot level maintenance will be performed at Tinker AFB, Oklahoma. With the number of force structure and basing decisions that are pending, it would be premature to announce possible basing decisions for the second location. After the Defense Base Closure and Realignment Commission makes its final recommendations, and these are acted upon by the President and the Congress, appropriate adjustments will be made to our basing plan. When the Air Force makes the final basing decision, it will be provided to the committee.

Senator DIXON. Last year this committee provided guidance regarding the phased development of hangar facilities for the B-2 aircraft. In short, we directed that no more than half the force be sheltered and that an operational test be performed before additional shelters were proposed. Has the Air Force's facility plan for Whiteman AFB been modified to bring it into compliance with this guidance?

Mr. BOATRIGHT. The Air Force has adjusted the maintenance facility construction program to provide facilities by the need data without being early to need. Consequently, there are no aircraft maintenance docks in our fiscal year 1992 budget request, and our fiscal year 1993 request for maintenance docks was revised from eight to six. The 50 percent threshold for maintenance docks at Whiteman will not be reached until the fiscal year 1995 Milcon budget submittal. The Air Force is working on developing appropriate tests, with the intent of briefing the committee prior to submittal of the Milcon projects that would exceed the threshold.

QUESTIONS SUBMITTED BY SENATOR TRENT LOTT

REAL PROPERTY MAINTENANCE

Senator LOTT. Mr. McMillan, the DOD budget request for fiscal years 1992-1993 had a provision to transfer a portion of the Real Property Maintenance account to the Military Construction accounts.

The budget markup by the House Committee on Armed Services transferred the funds in fiscal year 1992.

What is the impact of this early transfer and does the DOD support the early transfer?

Mr. MCMILLAN. The fiscal year 1993 request realigns $1.83 billion of facilities real property investment funding from Operation and Maintenance to the Military Construction accounts. By combining facility maintenance and construction costs in the same account, we expect better decision making and better utilization of funds. The funds realigned are used to finance minor construction projects costing up to $200,000 per project and major repair projects which often equal or exceed the cost of many regular construction projects. Recurring maintenance and minor repair funding has been retained in the Operation and Maintenance accounts.

This change will assist in the maximum effective use of limited resources and provide for improved management, planning, and budgeting since all facilities investment decisions will be managed on an integrated basis. Realignment of these resources to the multiple year construction appropriations will allow sufficient time to properly plan, design, and award projects with no urgency to spend resources that expire annually. The expanded execution cycle will provide greater flexibility in reacting to changes caused by base closures and force realignments. In addition, the outlay pattern for these projects more closely matches the outlays of unspecified Military Construction projects than that of the O&M appropriations.

The rationale for this realignment does apply equally to all program years. Although the change could be implemented on an accelerated time table, this is a significant change in our method of operation and will require modifying cost accounting and financial control systems. Additionally, if the House revisions are agreed to by the Senate, appropriate changes to 10 U.S.C. Chapter 133 should also be made to include the Guard and Reserve Military Construction appropriations, since the O&M funding for Guard and Reserve repair projects was also realigned.

Senator LOTT. Mr. McMillan, the condition of the DOD facilities is not good and the backlogs of corrective maintenance is increasing. The recent cuts to DOD funds have caused the individual services to decide to let the backlogs increase rather than divert funds from higher priority programs. We have been unable to find funds to correct these backlogs. Why does the DOD feel that combining the Real Property Maintenance and Milcon funds will help the situation? What would be the reaction at DOD if Real Property Maintenance needs were line item funded and directed by the Congress, as they currently do for Milcon projects?

Mr. MCMILLAN. Using military construction appropriations that are generally available for 5 years will allow for more orderly planning and execution of Real Property Maintenance projects. There won't be the end of year urgency to spend resources that expire annually. This change will permit better use of our limited resources. Bringing all investments together will focus decision makers on making trade-off decisions between repairing existing facilities or constructing new ones.

Line item funding of Real Property Maintenance projects would require the installation commander to predict which facilities would require what repair 2-3 years before the work would be done. This would severely impact the Department's ability to handle emergencies. It also could severely affect mission accomplishment because we wouldn't be able to quickly fix facility problems. This could jeopardize valuable collateral property if we had a leaking roof in a computer center. In short, line item funding of Real Property Maintenance projects would be a bad business practice that could adversely affect the operations of the Department, the morale of its people, and the cost of maintaining our facilities.

[Whereupon, at 4:00 p.m., the subcommittee was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEARS 1992 AND 1993

FRIDAY, JUNE 21, 1991

U.S. SENATE,
SUBCOMMITTEE ON READINESS,
SUSTAINABILITY AND SUPPORT,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

DEFENSE ENVIRONMENTAL RESTORATION ACCOUNT AND THE SERVICE ENVIRONMENTAL COMPLIANCE FUNDS ACCOUNTS

The subcommittee met, pursuant to notice, at 9 a.m., in room SR-222, Russell Senate Office Building, Senator Alan J. Dixon (chairman of the subcommittee) presiding.

Committee members present: Senators Dixon and Levin.

Committee staff member present: Madelyn R. Creedon, counsel.

Professional staff members present: Robert E. Bayer and David S. Lyles.

Minority staff members present: Ronald P. Kelly and George W. Lauffer, professional staff members.

Staff assistants present: Sarah C. Hoyt and Mary J. Kampo.

Committee members' assistants present: David A. Lewis, assistant to Senator Levin; Terence M. Lynch, assistant to Senator Shelby; and Eric H. Thoemmes, assistant to Senator Coats.

OPENING STATEMENT OF SENATOR ALAN J. DIXON, CHAIRMAN

Senator DIXON. Good morning, ladies and gentlemen. This morning the Subcommittee on Readiness, Sustainability, and Support continues our hearings on the national defense authorization request for fiscal years 1992 and 1993. Our subject today is the Defense Department's Environmental Restoration and Compliance Program. The past several years have seen a significant increase in the activity of the Federal Government in the area of environmental compliance and concern. In October 1989, Secretary Cheney issued a memorandum for the military departments that directed the DOD to be the Federal leader in environmental compliance and programs. I applaud the Secretary's actions in placing the environment among the Department's top priorities.

In fiscal year 1991 Congress increased funding for the Defense Environmental Restoration Account by 76 percent over the fiscal year 1990 funding. This is an enormous increase, particularly in a rapidly declining defense budget. The administration's request for fiscal year 1992 is 18 percent over the fiscal year 1991 funding.

Rapid and continued growth will be the pattern until the contamination from the past operations has been cleaned up. Current planning indicates that the funding increases will continue so that by fiscal year 1995 the Defense Environmental Restoration Program will be in excess of $2.5 billion per year. The total cost of the program will be in excess of $15 billion over the next 15 to 20 years.

The Department of Defense must now ensure that there is adequate planning, oversight, and staff, and that there are competent contractors to carry out this rapidly expanding program. At the same time the Defense Department program is expanding and moving out of the study phase and into the cleanup phase, the Department of Energy program will be doing the same. Competition for scarce regulatory and contractor resources will increase. We must work to ensure that Defense Department funds are used to support an efficient and effective program if we are to complete the cleanup actions.

An equally important part of the Defense Department environmental program is environmental compliance, bringing the operating sites into conformance with the various environmental laws. Next fiscal year the cost of environmental compliance will increase to almost $1.5 billion. To reduce the cost of current environmental compliance and to ensure that activities today are not destined to become the cleanup of tomorrow, DOD must take an active role at the front end of the waste management cycle and reduce or eliminate wherever possible the amount of hazardous and non-hazardous waste generated.

The subcommittee looks forward to receiving a report on the Department's progress and activities in cleaning up hazardous waste sites, obtaining compliance with environmental laws, its continued efforts to reduce hazardous waste production, and its plans for the future.

Mr. Thomas E. Baca, Deputy Assistant Secretary of Defense for Production and Logistics is our principal witness this morning. He is accompanied by Hon. Jacqueline E. Schafer, Assistant Secretary of the Navy, Installations and Environment; Mr. Jan B. Reitman, Director of the Environmental Policy Office, Defense Logistics Agency; Mr. Lewis D. Walker, Deputy Assistant Secretary of the Army for Environmental, Safety, and Occupational Health; and Mr. Gary D. Vest, Deputy Assistant Secretary of the Air Force, Environment, Safety, and Occupational Health.

We welcome all of you, of course, to the subcommittee this morning. We have had the opportunity to review your prepared statements, and these statements will, of course, be entered into the record. The Sierra Club asked to submit a statement for the record. We are happy to do this. And without objection, the letter received from the Sierra Club will be included in the record.

[The information follows:]

SIERRA CLUB,
Washington, DC, June 20, 1991.

Hon. ALAN J. DIXON,
Chairman, Subcommittee on Readiness, Sustainability and Support,
Senate Armed Services Committee,
Washington, D.C.

DEAR SENATOR DIXON: Thank you for allowing the Sierra Club to submit the following letter. Please accept this letter as our statement for the record.

We also thank you for the diligent hearings held by your subcommittee on the Department of Defense Environmental Restoration Account, and other DOD environmental programs. Your leadership on this issue is most appreciated.

On June 21st, your subcommittee is conducting an oversight hearing on the Department of Defense cleanup program. We understand that DOD panelists may be questioned on anticipated obstacles to compliance with the Resource Conservation and Recovery Act (RCRA).

The Department's views on this matter recently were submitted as part of the Administration's amendments to the Federal Facilities Compliance Act, S. 596.

This letter, in turn, communicates the Sierra Club's views of those amendments. We believe that the compliance obstacles articulated in the Department of Defense's amendments to S. 596 can be resolved without changing statute.

The Department's ordinance amendment is very broadly written. The Resource Conservation and Recovery Act (RCRA) regulates treatment, storage and disposal of hazardous waste. It does not regulate manufacture, testing and use. Broadly written statutory language on ordinance handling also communicates a mis-impression to the public. Some members of the public may believe that, a decade from now, broadly written statutory language will be used to argue for extensive "special" RCRA regulation of Department of Defense installations. Some citizens are concerned that broadly written language could facilitate the imposition of a treatment technology (i.e. incineration of chemical weapons) less protective of public health upon a skeptical public. Sierra Club believes DOD does not intend its installations to receive special dispensation from strict RCRA regulation. Nor do we believe that DOD seeks to impose its environmental decisions upon the public. Narrowing the language of the ordinance handling amendment will clearly communicate DOD's true to protect public health.

Secondly, the Sierra Club fails to understand why the Department of Defense has not petitioned the Environmental Protection Agency (EPA) for a special rule on RCRA regulation of military ordinances and munitions. When industry has identified an issue that may require special RCRA regulation, it petitions EPA for an administrative ruling. Special management procedures—variances from standard RCRA requirements—are resolved administratively. No change is made in statute. Sierra Club believes the Department of Defense's argument that RCRA requirement do not properly fit ordinance/munitions handling can be adequately resolved through EPA special rulemaking.

The public vessels amendment argues for non-RCRA regulation of waste aboard military ships. Like the ordinance issue we believe that problems posed by RCRA regulation of military ships can be resolved administratively. In fact, the special RCRA regulation of commercial ships was established through EPA rulemaking. We, therefore, encourage the Department of Defense to petition EPA for a special rule on hazardous waste management aboard military ships, so that hazardous waste abroad military and commercial ships are managed similarly.

The Federal sewage treatment works amendment proposed by the Department of Defense refers to a specific RCRA provision, the domestic sewage exemption. This exemption—and DOD's amendment—should be addressed when RCRA is reauthorized. It is unfair for Congress to resolve the Federal sewage treatment issue only to have the boarder issue—domestic sewage exclusion—changed a mere year latter. Instead of stability, the Department of Defense, theoretically, could face conflicting Congressional mandates in a short period of time.

Sierra Club supports the Federal Facilities Compliance Act, S. 596, as reported out of the Senate Committee on the Environment and Public Works. We strongly urge the Senate to enact S. 596 as reported, and to oppose all weakening amendments.

Thank you.

Sincerely,

SHIRA A. FLAX,
Toxics Specialist.

Senator DIXON. I understand that Mr. Baca will give a short opening statement. Mr. Baca, I would appreciate it if you would limit your opening remarks to not more than 10 minutes. We will then hear any additional brief comments that the rest of the panel may wish to make, not in excess of 5 minutes each, and this will allow more time for questions and discussions.

Let me recognize my friend, the distinguished Senator from Michigan, Senator Levin, do you have any statement this morning? I am delighted to see you, sir.

Senator LEVIN. Thank you. I do not have an opening statement, but this is an extraordinarily important subject that you are digging into, and we are all in your debt for doing so.

Senator DIXON. I thank you very much, Senator Levin.

At this time I would like to submit for the record prepared statements by Senators Wirth, Thurmond, Lott, and Coats

PREPARED STATEMENT BY SENATOR TIMOTHY E. WIRTH

Mr. Chairman, I would like to commend you for holding this hearing on environmental restoration activities in the Department of Defense. As you know, we have in Colorado one of the most polluted defense sites in the Nation—the Rocky Mountain Arsenal—the clean-up of which falls under the Defense Environmental Restoration Account (DERA).

Environmental restoration funding within the Department of Defense has grown dramatically over the past decade, and promises to continue to demand a growing share of defense resources. The fiscal year 1991 budget for DERA was just over $1 billion, compared to less than $200 million in the mid-1980s. The fiscal year 1992 request is for $1.25 billion, while the fiscal year 1993 request grows to $1.45 billion.

I am quite concerned that, as the demands on environmental restoration work grows, we continue to make available adequate resources and technology to deal with urgent environmental needs. As more and more sites are investigated, we find there is more and more to do. As defense budgets decline, the competition for increasingly scarce resources will become even more competitive. And environmental restoration is not always thought to add much to the stated mission of the Department of Defense.

I am particularly concerned, therefore, that we have in place an appropriate investment strategy on the technology side. It may be that by investing $200 million, for example, in research this year, we may save three times that in clean-up costs at the end of this decade. I believe that this concern was behind much of the thinking that went into the Strategic Environmental Research and Development Program (SERDP), an effort led by members of this committee and the Chairman last year.

I congratulate today's witnesses for their dedication and hard work in this monumental effort of environmental clean-up at thousands of defense sites nationwide. Thank you, Mr. Chairman.

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you, Mr. Chairman. I join you in welcoming our distinguished panel to today's hearing on the Department of Defense's Environmental Program funding request for fiscal year 1992.

Mr. Chairman, in reading the prepared statements it became obvious that the Department of Defense is dedicated to resolving the environmental problems caused by past neglect or ignorance. I believe a great deal of the credit is due to the management and dedication of our witnesses. I know both Mr. Vest and Mr. Walker have been involved in this effort for quite some time and deserve a great deal of credit for the progress both the Air Force and the Army have made in this area.

Mr. Chairman, my concerns about the environmental clean up program are not with the Department of Defense, but with the problems that the services face in implementing the program. I am particularly concerned about the different cleanup approaches, cleanup standards and priorities, and the moving standards. We all know that there are cases where the standards between the States and Federal Government vary widely, and frequently it is whoever has the most political clout that sets the standard. As long as these issues are not settled, our valued defense dollars are destined to go down a bottomless pit.

An additional concern is that we are expending our precious resources on cleanup technology that is not cost effective or may not even work. We ought to have the latitude to delay restoration projects in those instances until we can develop a proven cost effective technology.

Finally, Mr. Chairman, we all agree that the most important step in cleaning up our military installations is prevention of environmental damage. In my judgment the services are at the forefront of this challenge and deserve our encouragement and support.

Thank your Mr. Chairman.

PREPARED STATEMENT BY SENATOR TRENT LOTT

Thank you Senator Dixon. I too would like to welcome the witnesses to this hearing today on the Department of Defense environmental policies and funding requested for fiscal years 1992 and 1993.

The DOD programs are transitioning from emphasis on study and review to emphasis on correction and cleanup. The funding requirements are increasing, because correction and cleanup will be much more expensive than studies. This transition comes at a time when Defense budgets are decreasing.

These cleanup requirements are coming at a time when compliance requirements and costs are also becoming more detailed and expensive. We need to evaluate these recommended funding and priority policies to ensure the Department complies with environmental law and meet its social responsibilities.

The cleanup of facilities selected for closure remains an issue that still requires immediate attention. The source of funds to be used remains an unresolved issue. Without cleanup, transfer of facilities with environment hazards cannot be accomplished. If this issue cannot be resolved quickly, the sincerity of the closure program will be the subject of a great deal of doubt.

I look forward to the witness statements and the questions to follow.

PREPARED STATEMENT BY SENATOR DAN COATS

Thank you Mr. Chairman. I appreciate this opportunity to discuss the problems associated with the closure of the Jefferson Proving Ground (JPG) in Indiana. The subcommittee is well aware of this problem. I have discussed it in detail on numerous occasions since the 1988 Base Closure Commission made the flawed decision to close JPG.

I ask unanimous consent to submit for the record a statement by the distinguished mayor of Madison, Indiana, Morris Wooden. Madison is located next to JPG and Mayor Wooden has been actively involved with this issue since the announcement of the closure decision. His statement makes clear beyond doubt that every single premise upon which this closure decision was based is flawed.

I also ask unanimous consent to submit for the record a letter I wrote to Secretary of Defense Cheney on March 7, 1991 regarding JPG. In that letter I requested that the Secretary not permit the ongoing base closure process (BRAC-91) to preclude the Army and the DOD from fixing well documented and acknowledged mistakes such as the one made with regard to JPG.

Mr. Chairman, members of the subcommittee, I respectfully request that we take a close look at this issue and the recommendations made by Mayor Wooden. This is not just a matter of fixing an environmental nightmare in southern Indiana. The credibility of the base closure process is at stake. If we cannot recognize and fix unambiguous mistakes, how can we have confidence in the base closure process in the future?

Thank you for this opportunity to address the subcommittee.

Morris Wooden
MAYOR

416 WEST STREET
MADISON, INDIANA 47250
(812) 265-8300

City of Madison
OFFICE OF THE MAYOR

Written Testimony Given To

Subcommittee on Readiness, Sustainability and Support

Armed Services Committee

Mr. Chairman and Members of the Committee:

Jefferson Proving Ground (JPG) is an ammunition test facility, testing the full spectrum of conventional ammunition, such as those used in the modern M1-A1 tank that participated in the Iraq operation. JPG is located in Southeastern Indiana on 55,000 acres (1.6 times the size of Washington D.C., see enclosure).

JPG is on the first Base Closure list. The work at JPG is to be transferred to Yuma, but before this move to Yuma takes place, facilities must be built, at Yuma. The army has made a huge mistake and we are asking you not to appropiate any funding for construction at Yuma until the army has reexamined and justified the move in respect to the following items:

1. Closing Costs

   A. The commission report estimates one-time closing costs to be $57.1 million. New cost estimates developed by the U.S. Army are reported to be $140 million.

   B. The commission report estimates proceeds from the sale of the facility to be $25 million. With the knowledge that 52,000 of the 55,000 acres are contaminated beyond recovery for sale, new estimates are only $3 million under optimum conditions. Recent discovery of contamination in areas previously considered salable would indicate that $3 million may also be an inflated estimate.

   C. Additional costs not included in the commission report:
      a. Unemployment and retraining
      b. Duplication of personnel and equipment
      c. Cost of transferring work from Yuma to Dugway
      d. Cost of additional fencing, maintenance and security for the contaminated 52,000 or more acres forever
      e. Cost of wartime mobilization capacity at Yuma Proving Ground

2. Environmental

   A. The Assistant Secretary of Defense estimated cleanup costs at JPG to be $30 million. A 1989 report commissioned by the State of Indianaestimates a partial cleanup at $553 million.

   The agency contracted to provide the estimate was unwilling to even guesstimate the cost of a total cleanup. Within JPG boundaries is an area 1.6 times the size of Central Park in New York. This area is completely contaminated with depleted Uranium. (see enclosure).

   B. Cleanup cost estimates represent only a minimal surface cleanup, leaving 52,000 acres unusable and leaving behind untold amounts of as yet undefined waste.

   C. The JPG facility is being duplicated at Yuma Proving Ground, Arizona. The result will be a duplication of environmental disaster existing at JPG with no serious prospect of future cleanup of either site.

   D. Congress is being asked to appropiate $500 million annually over two years to close all 86 bases. JPG cleanup alone could easily represent that amount, and potentially billions more. Navy and Air Force have already identified required costs of closure and realignment effecting their bases which exceed the total requested allocation, not to mention those U.S. Army bases effected.

E. The lowest estimate of total cleanup for unrestricted land use at JPG is $6.04 billion. This amount exceeds the estimated 20 year savings of all activity to be undertaken in the base closure and realignment.

F. The commission was not to consider environmental cleanup in the determination of base closure. Other agencies of the federal government would be responsible for that activity. It should be noted that tax dollars, from whatever agency expenditure, come out of the same tax payer's pockets and that agencies responsible for such cleanup are not sufficiently funded to effect sites currently slated for cleanup! This, of course, makes one wonder:

Will even surface cleanup take place at JPG and if so how many decades in the future will even minimal cleanup occur?

3. Commission Directive - Pay Period

Commission guidelines clearly indicated base closure to be determined by the ability of closure/relocation to result in savings sufficient to "pay back" the cost of closure within 6 years. New substantiated U.S. Army data regarding the annual savings and construction costs at Yuma Proving Ground results in a "pay back" period of 91.8 years ($205 million [reconstruction cost] minus $3 million [salable land value] / $2.2 million [annual savings]). This is clearly beyond the bounds of standards within which the commission's work was to be performed. When minimal environmental cleanup and additional unconsidered costs are included the pay back period becomes absolutely ludricrous, into the 1000's of years. Evidently, a grevious error has been made.

4. Wartime Mobilization

The current transfer of assignment does not include the ability of Yuma to mobilize to a wartime position. The mission transfers a maximum capacity of 2400 lots per year. During the Korean War Era JPG test as many as 17,000 lots per year. The plans do not include any contingencies for the difference nor does it provide for any building funds. JPG can do it now, and more. We are leaving our country unprepared to support a conventional war. What obligations are we abandoning to our NATO friends and allies?

5. Civilian Safety

The JPG sister facility near Hope, Arkansas, built during the same period for a similar use, was closed following World War II. This facility was used only a fraction of the time and at only a fraction of the level of JPG, yet a clear record exists in Hope, Arkansas, of the continual environmental and safety hazards, to include civilian fatalities, which occur when such facilities are left uncleaned. A recent TV news report outlined similar problems including civilian fatalities at yet another similar closed but unclean facility, Camp Elliot near San Diego, California.

6. Independent Analysis

All studies (including the DOD Ordinance Test Facility, Utilization Study, 1977) have shown JPG to be the most efficient U.S.Proving Ground. The word incomprehensible fits the situation of closing JPG.

Summary

The people of Southeastern Indiana have lived with the explosions and window-ratteling of JPG for some 50 years, accepted the need for such facilities and are satisfied with the local ecnomic advantage of a facility which is vital to the preservation of our freedom and democracy. If there is a continuing need for such facilities then economics alone point to the continued use of JPG, the singly most efficient such facility in operation today. If, however, the facility is closed, we strongly object to a 52,000 acre contamination dump being left in our backyard while a similar contaminated dump is being developed at Yuma Proving Ground in Arizona. If cleanup cannot be undertaken here, can it ever be undertaken at any such site?

The Army knows that a mistake has been made, but they are marching to orders. The original law has already been modified. We need it modified again. The facts are clear: The national deficit would increase by closing JPG, we don't need another environmental disaster, civilian safety would decrease, Army flexibility would decrease, and JPG is the most efficient. Spending money in building at Yuma is a waste of tax payers money. I have written Mrs. Susan Livingstone Assistant Secretary of the Army, requesting the most recent data on JPG's closure. I am still waiting for the majority of that information and am enclosing a copy of that letter.

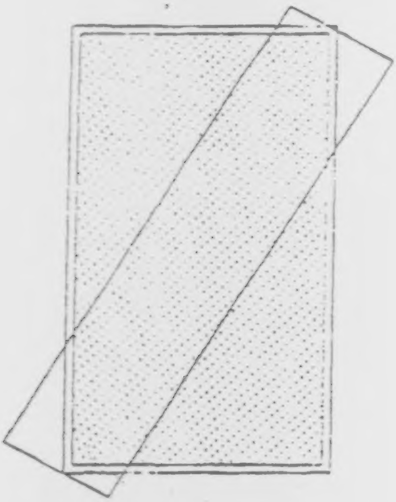
Sincerely,

Morris Wooden

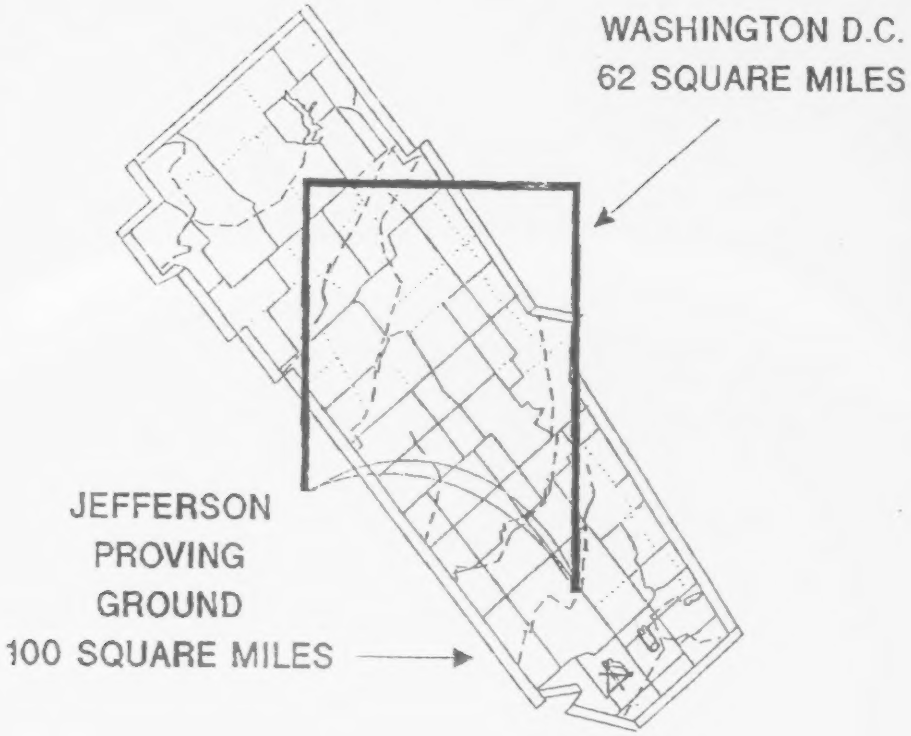
Morris Wooden
Mayor

Enclosure

DEPLETED URANIUM IMPACT VERSES CENTRAL PARK



DEPLETED URANIUM IMPACT AREA 1 MILE WIDE X 2 MILES LONG
CENTRAL PARK IN NEW YORK IS 1/2 MILE WIDE X 2 1/2 MILES LONG



City of Madison
OFFICE OF THE MAYOR

May 23, 1991

Mrs. Susan Livingstone
Assistant Secretary of the Army
Department of the Army
Washington, D.C. 20310-0103

Dear Mrs. Livingstone:

I appreciate you taking the time to visit Jefferson Proving Ground on May 3, 1991. I am sure that you realized the total absurdity in closing that facility.

I have questions that need to be answered, and they are as follows:

1) I still have not received the answer to wartime mobilization as requested in my letter to you dated February 20, 1991. Please supply me with that answer including raw data, calculations, and formulas used to determine any answer you may supply.

2) Could you send me the latest reconstruction costs at Yuma and the latest estimated annual savings? Please include a breakdown of those figures and point out the negative security costs of JPG associated in the annual savings breakdown. If the north 52,000 acres are to be mothballed, I would also expect to see a cost for the building of additional fencing and roads for security at JPG. Also, please provide the payback formula that DOD is now using.

3) Could I have a detailed drawing of the reconstruction area, impact areas and buffer zones for the new facility at Yuma? Please include in this material the present state of contamination for each acre of the land being affected in regards to uncontaminated to highly contaminated and a definition of the rankings.

We still plan a visitation to Washington in June, and I will be contacting you for coordination on that trip.

Sincerely,

Morris Wooden

Morris Wooden
Mayor

DAN COATS
INDIANA

United States Senate
WASHINGTON, DC 20510

March 7, 1991

The Honorable Richard B. Cheney
Secretary of Defense
The Pentagon
Washington, D.C. 20301

Dear Dick:

I am writing in regard to the planned closure of the U.S. Army Jefferson Proving Ground (JPG). I believe that this decision was a serious mistake and should now be reconsidered. I say this as one who has supported the base closure process and who has worked on the Senate Armed Services Committee to ensure that the DOD be permitted to close obsolete and unneeded bases.

In 1988, the Secretary of Defense's Commission on Base Realignment and Closure recommended that JPG be closed and its mission be transferred to Yuma Proving Ground (YPG). An analysis completed in 1989 by the General Accounting Office illustrated the scope of the Commission's errors pertaining to the JPG closure. Instead of amortizing the JPG closure within six years, as required by the Commission's charter, the GAO found that the closure would take from 37 to 200 years to amortize, depending on the level of environmental cleanup. Further, the Commission erroneously assumed that JPG and YPG missions were compatible and that the transfer could be accomplished with minimal investment in facilities and equipment (around $30 million). The current Army working estimate for transferring JPG's mission to YPG is nearly $140 million, including nearly $90 million in construction costs. The Commission was also mistaken in stating that JPG's property could be cleaned up and sold for $25 million. The GAO concluded that the property could not be sold due to the high level of unexploded ordnance that exists on the installation's property. Estimates for cleanup of JPG range from $550 million to $5 billion, depending on the level of cleanup.

The problems associated with the decision to close JPG go beyond economic miscalculations. The 23 million rounds that have been fired at JPG must be cleaned up, yet the Army has neither the funds nor the technology to undertake such an unprecedented cleanup. In this time of increased environmental awareness it would be ludicrous to walk away from this problem in Indiana simply to recreate an identical problem in Arizona.

Another fact that has been overlooked is that JPG is the only test center capable of handling testing at wartime mobilization levels. The plans for construction at YPG do not provide for mobilization. If Operation Desert Storm had been more protracted or destructive, JPG's capability would have been essential. Why would we pay large sums of money to create a lesser capability elsewhere?

Over the last two years, I have repeatedly been in contact with the Army on this matter -- with the Army Material Command (AMC), the Army Test and Evaluation Command (TECOM), and the Office of the Assistant Secretary of the Army for Installations, Logistics and Environment. The Army recognizes that the decision to close JPG was a mistake and is exploring options for keeping JPG in operation, perhaps as a Government-Owned Contractor-Operated (GOCO) facility.

I realize that, with the BRAC-91 process moving along, it is awkward to revisit BRAC-1 issues at this time. I find it hard to believe, however, that this system is so inflexible that it cannot recognize and rectify a documented mistake. If this is the case, the credibility of the base closure process would be seriously undermined.

If these mistakes are not reversed, the closure of JPG will cost the American taxpayer millions of dollars, damage our country's conventional readiness, and leave an environmental wasteland in an already economically depressed area of Indiana. This outcome is unacceptable, especially since it would be relatively easy to fix the problem. I perceive a strong willingness on the part of the Army to reverse these mistakes and, of course, I would be happy to assist in any way possible. If relief is required, I would be pleased to introduce the necessary legislation. As you know, other BRAC-1 issues have been addressed in this manner.

I respectfully request that you not permit the ongoing base closure process to obscure past mistakes. I trust you will give due consideration to my request.

Sincerely,

Dan Coats
United States Senator

CC: The Honorable Colin McMillan
Assistant Secretary of Defense
(Production and Logistics)
The Honorable David J. Gribbin
Assistant Secretary of Defense
(Legislative Affairs)
The Honorable Susan Livingstone
Assistant Secretary of the Army
(Installations, Logistics & Environment)

Senator Dixon. Mr. Baca, we are delighted to have you here this morning, sir.

STATEMENT OF THOMAS E. BACA, DEPUTY ASSISTANT SECRETARY OF DEFENSE, ENVIRONMENT

Mr. Baca. Thank you very much, Mr. Chairman. I will indeed limit my comments to less than 10 minutes. Mr. Chairman and members of the committee, I am pleased to appear before you and to take this opportunity to update you on the Department of Defense's progress in managing our substantial environmental responsibility. We appreciate your interest in our environmental programs and hope you will find this hearing both informative and useful. My testimony today will focus on DOD's environmental challenge and how we plan to meet that challenge.

In 1989, as you stated, Secretary of Defense Dick Cheney stated that he wanted DOD to become the Federal leader in environmental compliance and protection. He challenged us to eliminate the health and environmental risks at our installations, and at the same time to help meet the Nation's environmental goals. Enormous environmental problems confront the Department. We must clean up hazardous and toxic wastes from past activities, we must comply with a complex array of current Federal, State, and local laws and regulations, and we must take action to promote pollution prevention and prevent future environmental contamination. DOD is making progress on all these fronts.

I have visited dozens of installations in the past few months, and I can tell you that environmental protection and public health are unquestionably top priorities at every installation. Cleaning up toxic waste is our largest challenge. I am happy to report that 6,300 sites have been removed from our list. These include sites which have been remediated, the hazards removed, or where a determination has been made that no further action is required.

Another challenge is achieving compliance with current laws and regulations. This has become increasingly difficult as the number of environmental laws and regulations governing our actions has grown considerably. Pollution prevention offers the greatest potential for reducing DOD's long-term environmental problems, and we are vigorously substituting non-hazardous materials for hazardous materials, making process modifications, and recycling hazardous materials. Our goal is to achieve a 50 percent reduction in hazardous waste disposal by 1992.

DOD has more than 1,800 installations, many of which are as large as small cities. Nearly 5 million people, including the Reserve component and civilians, work at these installations. The national environmental effort will not succeed if an entity as large as the Department of Defense fails to participate in this national effort. To achieve and maintain compliance with Federal, State, and local laws, we are requiring that all DOD components identify and request through the budget process all funds and personnel needed to accomplish DOD's environmental goals and objectives.

DOD is increasing its efforts toward qualification of alternatives for those materials and processes that have high pollution potential. When acceptable substitutes are available, they are being considered for substitution to replace environmentally hazardous materials previously required by Federal specifications. Environmental concerns during the development, the production, and acquisition of weapons systems are of major concern. The first step is incorporating environmental considerations into the acquisition process with the recent revision to the Department's acquisition policy.

Most past administrative actions against installations by Federal and State environmental actions could have been prevented if there had been properly trained environmental staff available. We are addressing this concern through the identification of training opportunities for environmental personnel and promoting a management structure that provides accountability on the part of managers to their environmental responsibilities.

Our first priority in the clean-up program is to identify and clean up sites presenting the greatest risk to public health and the environment. There often exists a tremendous ambiguity in the laws over which regulatory agencies have primacy at DOD clean up sites. A clear hierarchy of authority over our clean up actions is needed, a determination of who truly is in charge. As we saw in the success of Desert Storm, clear lines of authority are prerequisite to success.

I cannot emphasize enough the importance we place on working not only with Federal regulators, but also with State regulators. We feel that the early involvement of the Environmental Protection Agency (EPA) and State authorities increases the public's comfort with the clean up actions taken.

We must find ways to shorten the remediation process that has, in some instances, gone on for more than 10 years.

One of the important things we hope to accomplish during the next year is a cooperative effort among DOD, Department of Energy (DOE), and EPA to do the following: to apply known and proven technologies to existing programs; to identify National Priority List (NPL) sites which are high candidates for removal from the NPL; to speed up the clean up process for NPL, as well as non-NPL sites; to accelerate the training of clean up personnel; to target facilities or elements within facilities which represent the greatest threat to human health and the environment. We are proud of the progress we have made in cleaning up our sites.

We have formed a task force to develop recommendations for better and faster ways to close and transfer our bases impacted by the Base Closure and Realignment Act, while still meeting environmental requirements. A model program for base closure environmental restoration is being developed to evaluate innovative solutions to improve the efficiency and effectiveness of the program's present operation.

I would like to touch on one final area, and that is legislation particularly as it relates to compliance by our military facilities. DOD is currently subject to Federal and State environmental laws. S. 596 (Federal Facility Compliance Act of 1991) would take the additional step of allowing civil penalties to be assessed administratively against Federal facilities for violation of Federal and State hazardous and solid waste requirements. We agree with the goal of this bill, that is to achieve better compliance. However, we also believe that this legislation does not address the causes of non-compliance at Federal facilities. This bill can be a part of a comprehensive program designed to protect our Nation's environment. We believe that some improvement must be incorporated into this bill. Adoption of the administration's amendments will result in these improvements.

In conclusion, Mr. Chairman, the Department is aware of its problems and has identified specific actions to improve the management and effectiveness of its environmental program. These efforts are being pursued in a coordinated approach, making use of the expertise within the Federal and regulatory community. Our budgets and our effort show that the Department is making real progress toward Secretary Cheney's vision. The success of our effort is directly related to your support. We must all strive to meet our national commitments to environmental excellence. We would like history to record that the Department was indeed the Federal leader in environmental stewardship.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Baca follows:]

PREPARED STATEMENT BY THOMAS E. BACA, DEPUTY ASSISTANT SECRETARY OF DEFENSE, ENVIRONMENT

INTRODUCTION

Mr. Chairman and members of the committee, I am pleased to appear before you and take this opportunity to update you on the Department of Defense's progress in managing our substantial environmental responsibility. We appreciate your interest in our environmental programs and hope you will find this hearing informative and helpful. My testimony today will focus on DOD's environmental challenge and how we plan to meet that challenge.

OVERVIEW

In 1989, Secretary of Defense Dick Cheney stated that he wanted DOD to become the Federal leader in environmental compliance and protection. He challenged us to eliminate the health and environmental risks at our installations and at the same time to help meet the Nation's environmental goals. The Department has subsequently developed a vision with its components to ensure this future.

Enormous environmental problems confront the Department. We must clean up hazardous and toxic wastes from past activities; we must comply with a complex array of current Federal, State and local laws and regulations; and we must undertake actions to promote pollution prevention and prevent future environmental contamination. DOD is making progress on all fronts. I have visited dozens of installations in the past several months and I can tell you that environmental protection and public health are unquestionably a top priority at every installation.

DOD'S CHALLENGE

Cleaning up toxic waste sites is our largest challenge. The number of sites included in the Defense Environmental Restoration Program have steadily increased since the inception of the program. Consistent with the Department's worst-first policy, emphasis initially was placed on contamination affecting public health and the environment. Efforts expanded yearly to include smaller installations with lower hazard potential. The cost for cleaning up these sites was estimated to be $9-$14 billion in 1988. We are currently updating that estimate and expect this number to increase.

By fiscal year 1989, 14,401 sites at 1,597 installations had been identified. In ~~fiscal~~ year 1990, these numbers increased to 17,482 sites at 1,855 installations. The installations added in fiscal year 1990 were small, non-industrial properties. Recent program growth trend in total sites is now leveling off and is expected to decrease over the next few years. Meanwhile, I am happy to report that 6,300 sites have been removed from our list. These include sites which have been remediated, the hazard removed or where a determination has been made that no further action is required.

The number of installations listed on the NPL also increased in fiscal year 1990. At the end of fiscal year 1989, 41 DOD installations were listed on the NPL and another 46 were on the proposed list. By the end of fiscal year 1990, 89 DOD installations are listed on the NPL and none remained on the proposed list.

Another challenge is achieving compliance with current laws and regulations. This has become increasingly difficult as the number of environmental laws and regulations governing our actions has grown considerably. In addition to regulations at the Federal level, many States have produced similar laws and regulations to implement Federal standards. Many States have gone much further, imposing stricter rules to protect their unique environmental resources and address public concerns. As a result, the number of notices of violations (NOV's) and other similar legal citations given to DOD has shown an increase. The Department will fully address all NOV's and citations. At the same time, however, DOD's own internal audits and inspections have been excellent tools in identifying and eliminating many more would be violations. Our fiscal year 1991 operating cost in DOD for environmental compliance activities is approximately $1.2 billion. That amount is expected to increase to $1.4 billion in fiscal year 1992 and remain at high levels over the next several years.

Pollution prevention offers the greatest potential for reducing DOD's long-term environmental problems and we are vigorously substituting non-hazardous materials for hazardous materials, making process modifications, and recycling hazardous materials. Our goal is to achieve a 50 percent reduction in hazardous waste disposal by 1992, based on a 1987 baseline. To date, we have made very significant headway in achieving this goal.

The disposal of non-hazardous waste has also become a significant challenge at military installations throughout the country as landfill sites are filled. Disposal costs are increasing as waste products are taken to more remote locations or treated in more expensive facilities.

DOD IMPACTS

DOD has more than 1,800 installations, many of which are as large as a small city. Nearly 5 million people (including the Reserve component and civilians) work at those installations. An additional 3 million dependents, or populations similar to those of the cities of Chicago and Los Angeles, live on or near defense installations.

The national environmental effort will not succeed if an entity as large as the Department fails to participate in the national effort. Similarly, if the Department can develop requirements for pollution-free processes and products, the multiplier effects we create can have a significant impact on the national environmental effort. DOD must be seen as a leader in the national effort.

DOD VISION FOR ACHIEVING ENVIRONMENTAL LEADERSHIP

If the Department is to fulfill the Secretary's challenge to be an environmental leader, we must execute our mission in an environmentally sensitive manner. We must set standards for environmental stewardship throughout the Federal Government and have our employees be widely respected and recognized for their commitment to environmental issues. We must actively involve the public and our neighbors when our operations affect them.

To achieve and maintain compliance with Federal, State, and local laws, we are requiring that all DOD components identify and request, through the budget process, all funds and personnel needed to accomplish DOD's environmental goals and objectives. Only by ensuring completeness and accuracy in the formal budget process can the Department take advantage of its own rigorous procedures for identifying and requesting resources to address specific shortcomings. Both Congress and the Department have stated their full commitment to environmental protection. Components will fully fund all requirements that currently are out of compliance 2 years. All other projects will be funded to meet specific DOD environmental program goals. For environmental restoration, our goal is to commence all site restoration remedial actions by the year 2000. By identifying these specific deadlines, we can achieve a more accurate understanding of our budgetary requirements. To meet this challenge and these goals we have realigned the Secretary's environmental office from media specific to functional areas. Through these efforts we are building the foundation of a continuously improving organization to meet the contemporary issues.

COMMUNICATION

The fall 1990 Defense Department forum on our Nation's defense and the environment provided an opportunity to hear considerable discussion on communications. Among the suggestions raised were DOD's need to foster understanding, trust, and communication with its neighbors; a need for a more openness from the Department; and the need to empower and encourage installation commanders to create active community relations programs. As a result we are reemphasizing the need to ensure that the public understands the nature of DOD's environmental efforts and the successes it has achieved.

USE OF HAZARDOUS MATERIALS

A large number of military and Federal standards, specifications, and related documents either require or permit the use of hazardous materials. Many of those materials, which include halons and chlorofluorocarbons (CFCs), can be reduced or eliminated from use to reduce the risk of future liabilities.

DOD is increasing its efforts toward qualification of alternatives for those materials and processes that have high pollution potential. We believe that those alternative materials are potentially available and could assist the Department in reducing hazardous material usage. When acceptable substitutes are available, they are being considered for substitution to replace environmentally hazardous materials previously required by Federal specification. These efforts are reducing future costly cleanup, storage, or disposal actions.

POLLUTION PREVENTION IN THE ACQUISITION PROCESS

Environmental concerns during the development, production, and acquisition of weapon systems are a major concern. The first step is incorporating environmental considerations into the acquisition process with the recent revision to the Department's acquisition policy. We are moving forward by developing a life cycle model; implementing models for new and fielded weapon systems; and recommending environmental training for weapon system program managers.

TRAINING AND TECHNICAL RESOURCES

Each component develops training and technical support capabilities to meet environmental challenges. However, in many areas, each component faces similar environmental requirements but individually lacks resources to fully expand its capability to address a whole spectrum of environmental issues. Since there is much economy to be realized through joint effort, a coordinated training approach is now being developed.

We are considering designating environmental resource centers using existing component organizations to provide technical support DOD-wide. Doing so would prevent costly overlap, improve the overall technical quality of the centers, and make the search for assistance by their customers much easier.

ENVIRONMENTAL STAFFING

Most past administrative actions against installations by Federal or State environmental agencies could have been prevented if there had been properly trained environmental staff available. During the 1990 forum on our Nation's defense and the environment, participants generally observed that sufficient and well trained environmental staffing are crucial given the problems at hand. We are addressing this concern through the identification of training opportunities for environmental personnel, and promoting a management structure that provides accountability on the part of the managers to their environmental responsibilities. These are all part of DOD's initiative to infuse an environmental ethic and vision throughout DOD as the Federal leader in environmental protection and compliance.

Personnel demands have grown exponentially due to increased regulatory and compliance activity. To keep pace with increasing demands, we are studying the feasibility of developing a graduate program in environmental science for Department personnel. The Secretary of Defense has stated that the creation of an effective environmental program within DOD begins and ends with people in the Department. The right people at the right place with the right training are essential to a successful program.

To ensure proper attention and emphasis is given to the personnel issue, I have created a personnel and review division within my organization. We will study the development of options to create a more attractive environmental career field with competitive pay scales, excellent potential for promotion and advancement, and recognition for those who achieve environmental progress and standards of excellence. This will help us in retention of our current staff and in the recruitment of new environmental managers.

The Federal Employees Pay Comparability Act of 1990 contains important provisions to support this effort.

ENVIRONMENTAL AWARENESS

Many violations of Federal and State environmental regulations occur because DOD personnel are not fully aware of the existence of regulatory programs or of their requirements. We are evaluating the training and educational needs of all DOD environmental personnel. DOD is considering including environmental responsibilities in all appropriate civilian and military job descriptions and they may become a key element in performance appraisals.

CLEANUP PROGRESS

Our first priority in the cleanup program is to identify and clean up those sites presenting the greatest risk to public health and the environment. We have begun this process, however, we have found a problem. There often exists a tremendous ambiguity in the laws over which regulatory agency has primacy at DOD cleanup sites. A clear hierarchy of authority over our cleanup actions is needed. Ambiguity leads to confusion, delay, duplication and added cost. I want to work with the States and EPA to resolve this issue and get on with our cleanup. As we saw in the success of Desert Storm, clear lines of authority are prerequisite to success.

One of the early lessons learned from the Defense and Environmental Initiative forum was the need to make a fundamental change; to establish a more cooperative partnership with regulators. Agreements between DOD, EPA and the States are intended to establish a mutually acceptable approach for conducting installation restoration activities and are an important milestone in the cleanup process. More importantly, it is my hope that they serve to focus our efforts on actually cleaning up the sites rather than becoming an end unto themselves. We are looking for ways to make progress, not perpetuate process. I cannot emphasize enough the importance we place on working not only with Federal regulators but also with State regulators.

The DOD policy is to enter into the agreements for NPL installations as early in the process as possible, well before the time they are required by law. We feel that the early involvement of EPA and State authorities increases the public's comfort with the cleanup actions undertaken. It can also provide a mechanism for resolving issues arising from overlapping or conflicting jurisdictions.

To facilitate State participation in the cleanup process, DOD now reimburses the States for up to 1 percent of the total cleanup costs through the Defense and State Memoranda of Agreement (DSMOA) program.

During fiscal year 1990, we signed Interagency Agreements (IAGs) with EPA and the States for 27 DOD NPL installations. The total number of signed agreements for site investigation and cleanup to date is 67 IAGs at 73 NPL sites. In addition, we currently have completed 26 DSMOAs with States.

Last year under the DSMOA program, we provided over $7.4 million to 11 States. This progress illustrates the emphasis DOD places on developing workable solutions for site cleanups in cooperation with the States, other agencies and the public. This year, we budgeted an additional $20 million to fund States who enter into the program by June of this year.

Achieving the goal of commencing all site restoration remedial actions by the year 2000 requires your continued support and the support of the regulators. We must find ways to shorten the remediation process that has, in some instances, gone on for more than 10 years. Together, in a spirit of partnership with State and EPA regulators, we can achieve this goal. Here are just a few improvements we are making that can help us succeed:

- Administrative Delays: We are taking measures to minimize delays related to contracting, personnel availability, and other internal factors.
- Review and Coordination: Our cooperative efforts with regulators have led to long review cycles. We are encouraging all reviewers, including regulators, to shorten their turn-around times. We are working toward reducing the number of iterations of report drafts.
- Sequencing: Many more cleanup activities can be conducted simultaneously rather than sequentially. While this is already being done, I think we can do even more. More innovative ideas are needed.
- Cleanup Versus Study Orientation: We frequently study a site with a goal of determining the nature and extent of contamination. That, however, is only an interim step in achieving the real goal of site cleanup. We must know when to stop studying and get on with the cleanup. I believe we must be more willing to take partial actions sooner than we perhaps have done in the past.
- Process/Concept Changes: The current national contingency plan process has often proven to be less than optimum for achieving rapid investigations and cleanups. We are looking for ways to collapse the process which will bring us to cleanup faster.

One of the important things we hope to accomplish during the next year is a cooperative effort between DOD, DOE and EPA to:

- Apply known and proven technologies to existing problems.
- Identify NPL sites which are high candidates for removal from the NPL.
- Speed up the cleanup process for NPL as well as non-NPL sites.
- Accelerate the training of cleanup personnel.
- Target facilities, or elements within facilities, which represent the greatest threat to health and the environment.

We are proud of the progress we have made in our cleanup program. However, we realize that there is still much to do. Our annual report for fiscal year 1990 shows the progress we are making. I am concerned that as the bulk of the work reaches the remediation phase that there will be increased pressure for additional funds. To address this issue we have developed and are implementing the Defense priority model (DPM)—a model to help DOD prioritize remediation efforts.

DEFENSE PRIORITY MODEL

We are positioning ourselves for the time when we will need to rely on the DPM as one of the tools to decide which site cleanups are funded first.

Model credibility is an important consideration. This is why we are working with the National Academy of Sciences to obtain their review of the DPM. A study committee has been established, and meetings began last month. We are looking forward to preliminary results this year, with a final report in 1992.

We are also continuing our coordination with EPA and States on DPM. The DPM has been a topic of special interest at our DOD/State DERP workshops.

INSTALLATION RESTORATION PROGRAM COST

Rising costs, even with the implementation of prioritization, still continues to be a concern. This is why we are in the process of updating the 1988 Total Installation Restoration Program cost estimate of $9 billion to $14 billion. We expect the revised estimate to be higher for several reasons. First, there are many more sites in the program than there were when the previous estimate was calculated (5,000 in 1988 versus 17,482 in fiscal year 1990). Secondly, our procedures for estimating the cost of remedial action, which is the largest factor in the estimate, have improved. We have more experience in conducting cleanups, and we used EPA's cost of remedial action model.

LIABILITY AND INDEMNIFICATION

One issue in the area of the restoration program stands out as currently pressing. In the near future, cleanup at DOD sites may be halted or seriously delayed because cleanup contractors are having difficulty in obtaining the surety bonds required by the Miller Act for the construction work needed at those sites. We are currently completing a report on remedial action liability contractors that will be provided to Congress in the near future. We believe it premature to make final recommendation at this point on a desired course of action. Our goal is to ensure we do the right thing by the Department, the contractors and the taxpayers. We are very conscious that any choice we make, for action or inaction, has economic consequences, conferring competitive advantage on some, disadvantage on others. DOD currently has several initiatives involving the contracting process to ensure better integration of environmental concerns. The engineering branches of the military services are examining their current contracting practices and will soon recommend changes to guidance policy, regulations and statutes to enhance the effectiveness of our remedial action contracting.

Concerning the current balance of risk situation, I wish to make these points:

- We can get adequate competition, for now, for our remediation contracts.
- We cannot determine if our cleanup costs have been driven up by bonding or insurance problems.
- We do not think cleanup quality has been affected.
- This can all change, perhaps quickly.
- Some well-regarded companies are not in the market because of the risk concerns.
- The current situation discourages innovation. Risk of innovation is on the contractor, who therefore is excessively conservative. The DOD and its contractor should negotiate how to share the risk of introducing innovative technology.
- Our negotiating risk sharing with our contractors can and should be improved.
- Contractors that clean up DOD sites should be held accountable for their negligence. A uniform standard of negligence would be helpful.
- A contractor that completes its cleanup work at a DOD site according to the terms of its contract should bear no risk of future liability.
- The DOD should bear the risk of liability that is due to the DOD's share in generating contamination.

In summary, continued health of the DOD cleanup program depends on continuing availability, at a reasonable cost, of a pool of technically qualified and financially responsible contractors.

BASE CLOSURE

We have formed a task force to develop recommendations for better and faster ways to close and transfer our bases impacted by the Base Closure and Realignment Act, while still meeting environmental requirements. The task force will be comprised of representatives from Federal Government Agencies, Environmental Regulatory Agencies, the National Association of Attorneys General and environmental groups. The first meeting was held this week. Recommendations will be provided to the Congress by November 1991.

Congress charged the Defense Environmental Response Task Force with making findings and recommendations on two categories of issues at bases that are being closed: (a) ways to improve interagency coordination; and (b) ways to consolidate and streamline the practices, policies and administrative procedures of relevant Federal and State agencies in order to expedite response actions and return land to productive use in the local economy. Congress specified that the Task Force make recommendations within existing laws, regulations and administrative policies.

A model program for Base Closure Environmental Restoration is being developed to evaluate innovative solutions to improve the efficiency and effectiveness of the program's present operation. The model program will identify specific areas where the potential exists to significantly improve the execution and overall operation of the program with respect to both time and cost.

Base closure installations also receive special emphasis under the DSMOA program. Base closure account funds will be used to reimburse States through the DSMOA process to cover their expenses in support of cleanup.

PROGRESS IN ACHIEVING AND MAINTAINING COMPLIANCE

The land, water and air at installations are precious resources and must be managed so that their restoration and protection are enhanced. The DOD components all have programs to prevent environmental degradation, identify environmental deficiencies and plan and implement the necessary corrective actions, and track compliance.

The resources requested in the President's budget are targeted toward meeting the challenge mentioned earlier. They include:

- Costs of compliance agreements.
- Making pollution prevention a priority, including improved master planning, enhanced recycling of both hazardous and non-hazardous waste, and waste minimization across the Department focusing on acquisition and development strategies.
- Enhanced operation and maintenance of wastewater treatment and solid and hazardous waste management facilities.
- Better identification, testing and remediation of our underground storage tanks.
- Enhanced ability to recruit and retain adequate environmental staff.
- Responding to changes in the environmental statutes and regulations of the Federal Government, the 50 States and the U.S. territories.
- Identifying, understanding and meeting the applicable requirements of the new Clean Air Act amendments.
- Better and more complete identification and management of our sensitive natural and cultural resources e.g., wetlands, endangered species, archaeological sites) to assure compliance and consideration in all planning and operations.

FEDERAL FACILITY COMPLIANCE ACT OF 1991 (S. 596)

I would like to touch on one final area—legislation—particularly as it relates to compliance by our military facilities. Last month, I testified before the Senate Environment and Public Works Committee on the Federal Facility Compliance Act of 1991. At the hearing, I emphasized that DOD is currently subject to Federal and State environmental law. There seems to be an impression among certain environmental interest groups that we are not. That simply is not so. The Resource Conservation and Recovery Act (RCRA) currently requires Federal facilities to comply with Federal and State hazardous waste laws and makes them subject to certain judicial enforcement actions. S. 596 would take the additional step of allowing civil penalties to be assessed administratively against Federal agencies for violations of Federal and State hazardous and solid waste requirements. We agree with the goal of this bill—that is, to achieve better compliance—however, we also believe that this legislation does not address the causes of non-compliance at Federal facilities. This bill can be part of a comprehensive program designed to protect our Nation's environment. While the legislation expands the administrative authority of the States, we believe that some improvements must be incorporated. Adoption of the administration's amendments will result in those improvements.

In past discussions on compliance, the focus was on the need for fines and penalties. These discussions eclipsed the need to address the underlying problems in that regulatory framework that prevented Federal agency compliance. Let me make a number of comments on the proposed legislation.

First, DOD is concerned about the application of RCRA storage, treatment and disposal standards to some aspects of military essential equipment and materiel.

These items simply do not fit neatly into the current RCRA scheme for waste management. Ordnance and munitions related activities are essential to our mission. The defense of our Nation and of freedom around the world demands that we conduct certain activities. We fear that a disproportionate emphasis on the current RCRA framework will force us to less safe activities, and eventually restrict the continued use of facilities and operations that are essential to the safety, training and continued readiness of our military personnel. We recommend that the legislation allow the President to modify or create a body of regulations under RCRA governing these military essential activities. Once established, the States could enforce these regulations through promulgation of parallel State regulations, as in other areas.

Second, there is an inconsistency between how privately held product-carrying vessels and military vessels are treated under RCRA. RCRA is not applied to hazardous wastes from private vessels until the waste is removed from the ship. RCRA regulations do not contain a similar provision for public vessels, and this inconsistency has led to attempts by regulatory agencies to treat military vessels as RCRA-regulated units, and subject to the RCRA requirements applied to shore facilities. Our warships are designed for combat, with special attention paid to size, arrangement, and structural integrity to survive in a hostile environment and protect our sailors. Because of the close quarters, there is an incentive to manage wastes using safe, protective procedures so that our sailors are not at risk. Our proposal would recognize the self-contained nature of these vessels, while requiring hazardous wastes to be controlled under RCRA as soon as they are removed from a ship to a shore facility, in the same manner as private vessels.

Third is employee liability. We are in agreement with the intent of the legislation to provide Federal employees with protection from civil liability. We believe, however, that the waiver of sovereign immunity is technically broader than the protection afforded. In addition, the bill added a provision that would authorize the head of a Federal agency to represent or reimburse employees in certain cases. These two clarifications play a significant role in our ability to hire and retain qualified environmental managers.

A fourth issue pertains to States' ability to support and oversee our programs. The Department owns a large number of facilities and our compliance and cleanup efforts put a demand on the States' capabilities to process our actions. We believe language is needed to clarify our ability to pay fees to assist States in their review of our permits and studies. Existing statutes and judicial holdings can be interpreted as being restrictive, thereby making it difficult for us to pay fees to States. We want to remove this ambiguity.

The last issue I would like to discuss is the requirement in the Senate bill (S. 596) for yet another assessment of our releases that is duplicative of requirements elsewhere in RCRA and in CERCLA section 120 and in our own authorizing legislation. We feel that this will keep us locked into the study phase and further delay progress on substantive cleanup work. The Department of Defense alone has completed assessments at over 17,000 of these sites at over 1,800 installations.

We are ready to work with the Congress to develop a bill that provides the necessary accountability at Federal facilities for environmental cleanup and compliance and recognizes the unique situations of Federal facilities. If adopted, the administration's amendments will allow the administration to support S. 596. However, unless the bill adequately resolves the issues addressed in these amendments, the administration will be forced to strongly oppose the bill.

CONCLUSION

The Department is aware of its problems and has identified specific actions to improve the management and effectiveness of its environmental program. These efforts are being pursued in a coordinated approach making use of the expertise with the Federal and regulatory community.

Our budgets and our efforts show that the Department is beginning to make real progress toward Secretary Cheney's vision. The success of our efforts is directly related to your support, the efforts of the regulatory agencies and communities which are our neighbors. We must all strive to meet our national commitment to environmental excellence. We would like history to record that the Department was indeed the Federal leader in environmental stewardship.

STATE COOPERATIVE AGREEMENT—FUNDING FISCAL YEAR 1990

(DSMOA Program)

Alaska	$ 277,826

California	5,216,688
Delaware	179,679
Florida	523,480
Illinois	177,719
Mississippi	100,000
Nevada	217,696
New Hampshire	241,624
Vermont	119,138
Wyoming	315,284
West Virginia	104,522

Senator DIXON. Mr. Baca, thank you for the clarity and the brevity of your remarks. We appreciate it. And who will be next among your colleagues?

Mr. BACA. Mr. Chairman, if we could have the Assistant Secretary of the Navy, Miss Jacqueline Schafer go next.

Senator DIXON. We would be delighted to hear from Miss Schafer.

STATEMENT OF HON. JACQUELINE E. SCHAFER, ASSISTANT SECRETARY OF THE NAVY, INSTALLATIONS AND ENVIRONMENT

Miss SCHAFER. Thank you very much, Mr. Chairman. Good morning, and good morning, Senator Levin. I am Jacqueline Schafer, Assistant Secretary of the Navy for Installations and Environment. I am pleased to appear before you today to discuss the Department of the Navy's environmental programs.

The Navy and the Marine Corps face a host of challenges with respect to these programs in the next decade. Moreover, these challenges will have to be met in an era of declining force structure, shore establishment, and financial resources. Despite these obstacles we have significantly increased environmental funding. I would like to take a few moments to discuss our environmental budget, to provide a few details about our ship and shore environmental programs, and outline some environmental issues of special interest to this committee.

The Department of the Navy's environmental budget contains funding for compliance with current Federal and State laws and regulations, and for clean up of hazardous waste sites previously created at Navy and Marine Corps installations. Compliance funds are budgeted and executed within Navy appropriations, while clean up funds are centrally budgeted in the Defense Environmental Restoration Account and transferred to Navy appropriations for execution.

Our fiscal years 1992 and 1993 President's budget includes $347 million in 1992 and $318 million in 1993 for environmental compliance, a significant increase over the 1991 level of $229 million. Our environmental compliance funds are found in seven appropriations. They are executed by virtually every claimant, and the Marine Corps, in the Department of the Navy. My written statement provides further details on what we plan to spend in each appropriation and what we would buy with that money.

We have also taken steps to more effectively account for our environmental compliance costs. Last year we established a new budget activity group to capture installation level environmental compliance costs previously buried within base operating accounts. We are now trying to separately identify environmental costs in our Industrial Fund and our Stock Fund. These actions are aimed to better assess our allocation of resources against identified environmental compliance requirements. We suspect we may be spending more on environmental compliance than we planned for that purpose, and we are striving to quantify these costs. We will then use this information to improve our budgeting and to take measures to avoid unnecessary costs.

The Navy Department's share of the Defense Environmental Restoration Account is $263 million in fiscal year 1992, and $413 million in fiscal year 1993, compared with $230 million allotted to us for fiscal year 1991. The financial requirements of this program also continue to grow as we complete studies leading to the selection of the best remedy and move into the clean up phase. We are grateful for the sustained support provided by the Congress as this program develops and matures.

We have a total of 2,253 sites at 242 Navy and Marine Corps installations in the program. We hope to complete preliminary assessments at all of our sites by the end of this fiscal year.

While only 15 percent of the fiscal year 1991 program supported remedial action, the percentage grows to 34 percent in 1992, and 78 percent in 1993. We are budgeting more of our DERA account funds for clean up.

Let me now mention a few specific environmental initiatives aboard our ships and at our shore installations. The Navy has an active shipboard pollution prevention program which has resulted in substantial modifications to the existing fleet and influenced our design concepts and criteria for future ships. We have modified our ships to retain sewage while operating in coastal waters and to discharge the sewage to pierside collection systems. We are in the midst of a multi-year program to outfit our surface combatants with oil-water separators and to process bilge water aboard ship.

In the past 2 years we have developed and put in place a shipboard program to manage plastics, thereby reducing overboard discharge by 70 percent. We retain all medical waste on board until we can safely dispose of them ashore. And finally, we have initiated a shipboard management program to reduce the use of hazardous materials. In those cases where we must use hazardous materials we have taken steps to ensure that they are properly handled, packaged, and transferred ashore for reuse, treatment, or disposal.

At our shore installations we are implementing a Navy-wide program for hazardous materials management and control. We want to reduce the use of hazardous materials in the Navy by changing specifications and work procedures or substituting other less hazardous materials for those now in use. By the end of 1992 we hope to achieve a 50 percent reduction in hazardous waste disposal when compared with 1987. We are also developing solid waste recycling programs at our shore facilities. Currently 62 percent of the Navy's shore installations have qualified recycling programs, and by the end of 1991 we expect all installations to have such programs.

I would now like to address a few environmental issues of particular concern to the Department of the Navy. First, the Federal Facilities Compliance Act, S. 596, is an amendment to the Resource Conservation and Recovery Act moving through the legislative process at this time. The amendments would allow the states to fine and penalize Federal agencies for violating Federal, State, and local solid and hazardous waste laws. The underlying objective of the amendment is of course to improve compliance with environmental regulations. The Department of the Navy believes that this objective can be achieved, and strongly supports amendments to the bill as proposed in the joint letter signed by the Secretary of Defense, the Secretary of Energy, and the Administrator of the Environmental Protection Agency on May 29, 1991. I would welcome the opportunity to discuss the Navy's perspective on specific amendments should the committee choose to pursue the subject.

We are particularly concerned about State and local officials exercising individual authority to regulate ship discharges from our naval vessels. As I stated earlier, we have established a proactive environmental pollution prevention program. However, it would be unworkable for a Navy vessel which must transit various State waters to comply with multiple and sometimes conflicting State and local requirements, different procedures, multiple permit requirements, and varying enforcement standards.

We strongly support a twofold approach, placing into the Clean Water Act a regulatory exclusion for discharges incidental to the normal operation of the vessel which are environmentally inconsequential, and second, the establishment of uniform national discharge standards for effluents from pollution control devices such as oil-water separators aboard naval vessels. We will work with the appropriate committees on this matter, as well as the Environmental Protection Agency.

In response to the international concerns about ozone depleting substances, chlorofluorocarbons and halon chemicals, we are seeking safe, suitable substitutes for these substances. Four CFC and two halon chemicals listed in the Montreal Protocol are critically important to Navy and Marine Corps operations because our ships, aircraft, and armored vehicles need them as refrigerants, cleaning agents, and fire fighting agents.

We are funding research efforts to find suitable substitutes and to develop non-CFC technologies. Our choices range from developing drop in substitutes, adopting recycling or reclamation technology, or redesigning equipment that uses substances that are less harmful to the ozone layer. We need time for an orderly phase out of CFC and halon chemicals.

We can live with a near zero release policy, with the exception of fire extinguishing devices where safety of life is involved. We cannot, however, live with a zero use policy until other suitable products are available. We would incur enormous costs to retrofit the fleet with new, unproven cooling and fire fighting systems that could endanger the performance of our weapons systems and the lives of our service personnel. I recommend that we do not accelerate the phase out of the use of CFC's and halons until suitable alternatives are available.

In summary, we are committed to improving our environmental practices through management actions, new initiatives, and additional resources. Despite manpower and budget cuts, the President's 1992 and 1993 budget programs to increase funding for all Department of the Navy environmental programs, including our DERA funding, to $610 million in fiscal year 1992 and $730 million in fiscal year 1993. This budget will carry us further toward our ultimate goal that the Navy and Marine Corps meet its mission to defend the country and be a good environmental citizen. It is both our duty and our direction.

Thank you very much, Mr. Chairman.

[The prepared statement of Miss Schafer follows:]

Prepared Statement of Hon. Jacqueline E. Schafer, Assistant Secretary of the Navy (Installations and Environment)

Mr. Chairman and distinguished members of the committee, I am Jacqueline E. Schafer, Assistant Secretary of the Navy for Installations and Environment. I am pleased to appear before you today to discuss the Department of the Navy's environmental programs.

The Navy and the Marine Corps face a host of challenges with respect to these programs in the next decade. Moreover, these challenges will have to be met in an era of declining force structure, shore establishment, and financial resources. Despite these obstacles, we have significantly increased environmental funding, and have set in motion a number of environmental initiatives which will allow us to meet these challenges.

I would first like to give you an overview of our environmental budget. I will then describe management actions we have taken at the headquarters level, provide additional details about our ship and shore environmental programs, and discuss our portion of the Defense Environmental Restoration Program. I will conclude by outlining a number of environmental issues of special interest to the committee, including environmental cleanup costs for base closure locations.

DEPARTMENT OF THE NAVY ENVIRONMENTAL BUDGET

The Department of the Navy's environmental budget contains funding for compliance with Federal and State environmental regulations, and cleanup of pollution at present and former Navy and Marine Corps installations. Compliance funds are budgeted and executed within Navy appropriations, while cleanup funds are centrally budgeted in the Defense Environmental Restoration Account (DERA) and transferred to Navy appropriations for execution.

Our fiscal years 1992-1993 President's budget includes $347 million in fiscal year 1992 and $318 million in fiscal year 1993 for environmental compliance, a significant increase over the fiscal year 1991 level of $229 million. The Secretary of Defense requested $1,253 million in fiscal year 1992 and $1,450 million for the DERA account in the fiscal years 1992-1993 President's budget, up from $1,063 million appropriated in fiscal year 1991. Our share of the DERA fund is $263 million in fiscal year 1992 and $413 million in fiscal year 1993, compared to $230 million obtained in fiscal year 1991. I will discuss our DERA funding in greater detail later.

Our environmental compliance funds are found in seven appropriations. They are executed by virtually every claimant and the Marine Corps in the Department of the Navy. The following table lists the seven appropriations containing environmental funds, the amount of approved fiscal year 1991 funding, and the amount of funds requested in the fiscal years 1992-1993 President's budget.

Department of the Navy Environmental Compliance Funds—Fiscal Years 1992–1993 President's Budget Submission

[Dollars in Millions]

Appropriation	Fiscal years		
	1991	1992	1993
Ops & Maint, Navy	$122	$192	$179
Ops & Maint, Navy Res	4	1	1
Ops & Maint, Marine Corps	33	36	36
Other Procurement, Navy	24	40	49
Research, Dev, Test & Eval, Navy	12	26	28
Mil Construction, Navy	36	30	24
Def Bus Ops Fund, Navy		21	2

Department of the Navy Environmental Compliance Funds—Fiscal Years 1992-1993 President's Budget Submission—Continued

[Dollars in Millions]

Appropriation	Fiscal years 1991	1992	1993
Total Department of Navy	$229	$347	$318

Let me give you a quick summary of what these funds support. As the above table shows, most of our environmental compliance funds are in operations and maintenance accounts. This money pays for such things as hazardous waste storage, treatment and disposal; asbestos assessments, removal and disposal; design and construction of minor facilities and equipment modification to meet environmental requirements; maintenance of shipboard pollution equipment such as skimmers, booms and boats; and environmental permits, fines, litigation and preparation of required documentation.

Our procurement account buys ship and shore environmental equipment. For example, we use this account to buy and install such shipboard equipment as sewage pumps, solid waste processors, oil water separators, and oil spill containment and recovery systems. Most of the increased funding in fiscal year 1992 and fiscal year 1993 supports procurement and installation of specialized solid waste equipment, such as shipboard vertical trash compactors. We also use this account to fund pollution control equipment at shoreside bulk fuel oil depots.

Our Research, Development, Testing and Evaluation Account funds studies in shipboard solid waste management, plastics reduction, and ordnance reclamation and disposal. The program growth in fiscal year 1992 and fiscal year 1993 supports chlorofluorocarbon (CFC) and halon reclamation, substitution and recycling research and development studies.

Finally, our construction accounts include funding for the traditional military construction (MILCON) appropriation as well as the new Defense Business Operations Fund (DBOF). Our fiscal year 1992 MILCON requests includes construction of a $17 million wastewater treatment plant improvement project at Cherry Point, North Carolina; a $7.7 million sanitary wastewater system upgrade at Roosevelt Roads, Puerto Rico; and a $1 million hazardous waste storage facility at Mayport, Florida. Our fiscal year 1993 MILCON request supports construction of a $4.1 million abrasive blast facility at Albany, Georgia, and $19.8 million in sewage treatment plant modifications at Camp Pendleton, California. Our fiscal year 1992 DBOF request includes a $10.5 million wastewater treatment plant expansion at Pearl Harbor, Hawaii; a $6.6 million industrial wastewater treatment facility at Indian Head, Maryland; a $3.3 million industrial waste treatment facility at Jacksonville, Florida, while our fiscal year 1993 DBOF request funds a $1.1 million hazardous waste storage facility at Yorktown, Virginia and a similar $600K facility at Charleston, South Carolina.

I will now describe several headquarters level environmental management actions we have undertaken in the last year.

NAVY HEADQUARTERS MANAGEMENT ACTIONS

The Department of the Navy has undertaken a number of headquarters management actions in the last year to strengthen its environmental programs. These actions started right at the top . . . with the establishment of the position of the Assistant Secretary of the Navy for Installations and Environment in March 1990.

The Chief of Naval Operations, the Commandant of the Marine Corps and I, on behalf of the Secretary, have worked to strengthen the Department of the Navy's environmental policies and procedures in several areas. For example, last October the CNO issued an updated version of the Navy's comprehensive environmental and natural resources policy manual. The manual stresses pollution prevention and contains new policies on environmental compliance at overseas installations and Department-wide solid waste source reduction. We also issued a Navy Strategic Program Plan that lists our accomplishments in fiscal year 1990, and contains planning assumptions, specific goals and resources for fiscal year 1991. The Marines are working on a similar plan. We will combine both of these execution plans into a comprehensive Department of the Navy Environmental Strategic Plan which sets specific near term (fiscal years 1992-1993) and long-term (through fiscal year 2000) environmental and natural resource goals and objectives. I have provided strategic guidance to accomplish our goals throughout the Department of the Navy between now and the end of the decade.

We have also taken steps to more effectively account for our environmental compliance costs. Last year, we established a new budget "activity group" to capture installation level environmental compliance costs previously buried within base operating accounts. We are now trying to separately identify environmental costs in our Industrial Fund and our Stock Fund. These actions are aimed to better assess our allocation of resources against identified environmental compliance requirements. We suspect we are spending more on environmental compliance than we planned for that purpose and we are striving to quantify these costs. We will use the information to improve our budgeting, or to take measures to avoid unnecessary costs.

Although we have done some form of environmental auditing for over 15 years (we used to call such audits "environmental engineering surveys"), we strengthened the process last year by creating a three-tier environmental compliance evaluation (ECE) program. Tier 1 is an annual self evaluation by the installation. Tier 2 is a detailed compliance evaluation by the installation's parent command and Navy engineering field division. Tier 2 evaluations are done at least every 3 years or more frequently, if needed. Tier 3 is an official audit by the Naval Environmental Inspection Team working for the Naval Inspector General.

This three-tier audit process has proven quite effective in the early identification of compliance issues, but it is not foolproof. Consequently, Department of the Navy activities have experienced their share of EPA and State inspections which found administrative and procedural deficiencies that required additional management attention and resources to correct. We appreciate the legitimate oversight role of Federal and State environmental regulatory agencies, and have emphasized reaching reasonable enforcement agreements to bring our activities into compliance on a prescribed schedule and with predictable costs.

I believe these management actions reflect the Department of the Navy's commitment to address environmental issues in support of its operating forces. I would now like to turn to some specific ship and shore environmental initiatives.

SHIP ENVIRONMENTAL INITIATIVES

The Navy has an active shipboard pollution prevention program which has resulted in substantial modifications to the existing fleet and influenced our design concepts and criteria for future ships. We have modified our ships to retain sewage while operating in coastal waters and to discharge the sewage to pier side collection systems. We are in the midst of a multi-year program to outfit our surface combatants with oil-water separators to process bilge water aboard ship.

As you know, the 1987 Marine Plastic Pollution Research and Control Act requires the elimination of all plastic discharges into the ocean by January 1994. In the past 2 years, we have developed and put in place a shipboard program to manage plastics, thereby reducing overboard discharges by over 70 percent.

In similar fashion, the 1987 U.S. Public Vessel Medical Waste Anti-Dumping Act restricts discharge of shipboard medical waste. We have put in place comprehensive controls to ensure that medical wastes are retained on board until we can safely dispose of them ashore.

We have initiated a shipboard management program to reduce the use of hazardous materials. In those cases where we must use hazardous materials, we have taken steps to ensure that they are properly handled, packaged, and transferred ashore for reuse, treatment or disposal.

Looking toward the future, we are developing the technology necessary for an "environmentally sound" ship of the 21st century. Our warships have large populations, put to sea for long periods of time, and are space constrained. This requires that we develop unique waste processing equipment.

We are still not perfect in this area, either. We have had some instances of violations of our own policies and rules. Therefore, we are continuing to work hard to train our people to be good stewards of the ocean environment.

SHORE ENVIRONMENTAL INITIATIVES

At our shore installations, we are implementing a Navy-wide program for hazardous materials management and control. We want to reduce, to the maximum extent practical, the use of hazardous materials in the Navy by changing specifications, work procedures, and processes. We have integrated hazardous material management as part of our weapon system acquisition process. We are developing models to predict the true life cycle costs for hazardous material, from acquisition, to industrial use, and eventual disposal so we can factor in these costs, versus use of alternative materials. We are changing our procurement strategies to limit the types and amounts of hazardous material kept on hand to eliminate unnecessary stockpiling and expensive disposal cost of outdated hazardous materials.

Where feasible, we are substituting other less hazardous materials for those now in use. For example, we specify the use of bacterial enzymes instead of toxic solvents to clean ship sewage tanks, where possible. We are also introducing the use of recyclable steel grit and plastic beads to remove old paint. Where we must use hazardous materials to accomplish our mission, we will ensure that these materials are controlled from cradle to grave. We are training our employees on how to handle hazardous material, and how to minimize the amount of hazardous waste generated. By the end of fiscal year 1992, we hope to achieve a 50 percent reduction in hazardous waste disposal, when compared to fiscal year 1987. Our long-term goal is continual year-to-year reduction in accordance with Total Quality Leadership principles, with an eye on complete elimination of hazardous waste disposal.

We are also developing solid waste recycling programs at our shore facilities. Currently, 62 percent of the Navy shore installations have "qualified" recycling programs and by the end of fiscal year 1991, we expect all installations to have such programs. In each of the last 3 years, the Navy doubled its income from these programs. In fiscal year 1990, we generated approximately $12 million. We used this money to fund morale, recreation, and welfare projects on our installations. For example, Naval Air Station Jacksonville, Florida, used some of its recycling revenue to transform a package store into a child development center. That installation won the 1990 Keep America Beautiful Recycling Award, and the 1990 National Recycling Coalition Award for its highly successful recycling program.

Let me now address our Installation Restoration Program.

NAVY INSTALLATION RESTORATION PROGRAM

Our Installation Restoration (IR) Program continues to focus on responding to potential threats from old hazardous waste sites from past Navy and Marine Corps operations. As we gather information about our sites, we want to accomplish two goals: locate our worst problems and clean them up first; and identify those sites which do not require cleanup.

The financial requirements of the IR program continue to grow as we complete studies and move into the cleanup phase. We are grateful for the increased funding provided by the Congress; Navy funding has grown from $69 million in fiscal year 1989 to $230 million in fiscal year 1991. As I mentioned earlier, our share of the DOD IR budget request includes $263 million in fiscal year 1992 and $413 million in fiscal year 1993.

We have 242 Navy and Marine Corps installations in the program, with a total of 2,253 sites of varying sizes and potential significance identified and under investigation. We hope to complete preliminary assessments at all of our sites by the end of this fiscal year. Finishing this first phase of the program will tell us where we need to continue with field assessments. At the end of the last fiscal year, we had identified 775 sites (34 percent of all sites) that did not warrant further action. We continue to refine estimates of the work remaining, using models developed for EPA's Superfund program. These estimates are given to DOD to project the Department's budget requirements.

As we complete the initial assessment phase for our 2,253 sites, we can apply increased attention to the second phase, called remedial investigation/feasibility study (RI/FS). This is where we explore alternative solutions to correct identified problems. The final phase is known as remedial design/remedial action (RD/RA), where we complete the design project and initiate actual cleanup. While only 15 percent of the fiscal year 1991 program supported cleanup, the percentage grows to 34 percent in fiscal year 1992, and 78 percent in fiscal year 1993. We are budgeting more of our DERA funds for actual cleanups. We are working with the Department of Defense, the Department of Energy, and the Environmental Protection Agency to try to further accelerate the RI/FS phase.

We have 23 installations on the National Priorities List (NPL). To date, we have signed Federal Facilities Agreements (FFAs) with EPA and State regulators for 17 of these installations, and are pursuing agreements for the remaining six. At all sites, with or without an agreement, we are going forward with investigations leading to cleanup.

We have also signed our first Record of Decision (ROD) at a site on the National Priorities List. Last September, we signed an agreement with the Regional Director of the EPA and the Minnesota Pollution Control Agency to remedy ground water contamination at the Naval Industrial Reserve Ordnance Plant (NIROP) in Fridley, Minnesota. NIROP has manufactured naval ordnance since 1940, and past waste disposal practices contaminated the ground water supply with high levels of trichloroethylene and other volatile organic compounds. Under the terms of the ROD, we will pump and treat the ground water to meet discharge standards, and will conduct periodic specified reviews to ensure that the containment and recovery system continues to protect human health and the environment. A key ingredient in implementing this cleanup was the concerted effort of the EPA, State and local government officials, and other community members toward agreeing on an effective solution to the problem.

While our 23 NPL sites are our worst pollution problems, the vast majority of our DERA sites are non-NPL sites, yet many have significant environmental problems. As further studies are completed, some of the sites may become NPL sites in the future. We are exploring the use of remediation agreements with States. The agreement, similar to a FFA used at NPL sites, would specify review procedures and schedules for site investigations and cleanup.

I would now like to address several environmental issues of particular concern to the Department of the Navy.

ENVIRONMENTAL CLEANUP FOR BASE CLOSURE LOCATIONS

The Department of the Navy is implementing closure and realignment cleanup actions for the four sites included in the 1988 Base Closure and Realignment Act. These sites are: Naval Station New York (Brooklyn), New York; Naval Station Puget Sound, Washington; Naval Station San Francisco (Hunters Point), California; and Naval Hospital Philadelphia, Pennsylvania. As a result of the 1990 Authorization Act, all environmental costs at base closure and realignment sites are funded in the Base Closure and Realignment Account. We have budgeted $4 million in fiscal year 1992 and $23 million in fiscal year 1993 in this account for environmental compliance and cleanup at the 1988 sites.

The Department of the Navy included nine major domestic bases and 11 other activities for closure or realignment under the 1991 Defense Base Closure and Realignment Commission (DBCRC). We estimate that the environmental cleanup and compliance costs for closure or realignment of these sites will exceed $500 million over the next 5 years. Five installations nominated for closure are on the Environmental Protection Agency's NPL: Hunters Point Annex of Naval Station Treasure Island, California; Naval Air Station Whidbey Island in Oak Harbor, Washington; Naval Air Station Moffett Field in Sunnyvale, California; Naval Air Development Center in Warminster, Pennsylvania; and the Construction Battalion Center in Davisville, Rhode Island.

FEDERAL FACILITIES COMPLIANCE ACT

An amendment (S. 596) to the Resource Conservation and Recovery Act (RCRA) is moving through the legislative process. This amendment would allow States to fine and penalize Federal agencies for violating hazardous waste laws. The underlying objective of the amendment is, of course, to improve compliance with environmental regulations. The Department of the Navy believes that this objective can be achieved, and strongly supports amendments to the bill proposed in a joint letter signed by the Secretary of Defense, the Secretary of Energy, and the Administrator of the EPA on May 29, 1991. I would welcome the opportunity to discuss the Navy's perspective on the specific amendments to S. 596 with members of the committee.

NATIONAL SHIP DISCHARGE POLICY

We are particularly concerned about State and local officials exercising individual authority to regulate ship discharges from our Naval vessels. As I stated earlier, we have established a proactive environmental pollution prevention program. However, it would be unworkable for a naval vessel, which must transit various State waters, to comply with multiple and sometimes conflicting State and local requirements, different procedures, multiple permit requirements, and varying enforcement standards. We strongly support a twofold approach: (1) placing into the Clean Water Act the regulatory exclusion for discharges incidental to the normal operation of a vessel which are environmentally inconsequential, and (2) establishment of uniform national discharge standards for effluents from pollution control devices (e.g., oil/water separators) aboard naval vessels. We will work with the appropriate committees on this matter.

We are seeing more and more bodies of water classified as "special areas" in which all discharges of garbage (except food wastes outside a 12-mile limit) are prohibited. Navy ships must operate on all of the world's seas and oceans. We must ensure that our ships are environmentally capable of meeting the growing restrictions, while still maintaining our warfighting capability. Since all of the world's navies face the same environmental challenge, we are working with our NATO allies to ensure that we cooperatively achieve shipboard environmental goals.

CFC AND HALON SUBSTITUTION

In response to international concerns about ozone-depleting chlorofluorocarbon (CFC) and halon chemicals, we are seeking safe, suitable substitutes for these substances. Four CFC and two halon chemicals listed in the Montreal Protocol are critically important to Navy and Marine Corps operations because our ships, aircraft, and armored vehicles need them as refrigerants, cleaning agents, and fire fighting agents. We have taken a leadership role in working with other DOD services, the EPA, the Department of State, and chemical and equipment manufacturers to address common problems and the Navy's unique requirements. We are funding research efforts to find suitable substitutes and to develop non-CFC technologies. Our choices range from developing drop-in substitutes, adopting recycling or reclamation technology, or redesigning equipment that uses substances that are less harmful to the ozone layer.

We need time for an orderly phaseout of CFC and halon chemicals. We can live with a near-zero release policy, with the exception of fire extinguishing devices, where safety of life is involved. We cannot, however, live with a zero use policy until other suitable products are available. We would incur enormous costs to retrofit the fleet with new, unproven cooling and fire fighting systems that could endanger the performance of our weapon systems and the lives of service personnel. I recommend that we do not accelerate the phaseout of CFCs and halons until suitable alternatives are available.

CONCLUSION

In summary, we are committed to improving our environmental practices through management actions, new initiatives, and additional resources. The Department of the Navy has budgeted $459 million in fiscal year 1991 to comply with environmental regulatory requirements and to clean up contamination at present and formerly used sites. Despite manpower and budget cuts, the President's fiscal years 1992–1993 budget proposes to increase funding for all Department of the Navy environmental programs, including our DERA funding, to $610 million in fiscal year 1992 and $730 million in fiscal year 1993. This budget will carry us further toward our ultimate goal that the Navy and Marine Corps meet its mission to defend the country and be a good environmental citizen. It is both our duty and direction.

Thank you for this opportunity, Mr. Chairman. I would be pleased to answer any questions.

Senator DIXON. Thank you, Miss Schafer. Mr. Reitman. Do you prefer that you do some other order?

Mr. BACA. Yes, Mr. Chairman, if we could have Mr. Walker testify.

Senator DIXON. We would be delighted. Mr. Walker.

STATEMENT OF LEWIS D. WALKER, DEPUTY ASSISTANT SECRETARY OF THE ARMY FOR ENVIRONMENTAL, SAFETY, AND OCCUPATIONAL HEALTH

Mr. WALKER. Mr. Chairman, members of the committee. I am pleased to appear before you today to discuss the Army's environmental program. I have just a brief statement that reflects aspects of my complete statement. The main thrust areas of the Army's program deal with the compliance, pollution prevention, including hazardous waste minimization, contamination clean up, and base closure.

In regard to compliance, Mr. Chairman, the Army's goal as set forth by Secretary Stone is to be the leader among Federal agencies in environmental compliance. An environmental ethic has been established and is being integrated to all of our activities. The challenge is to stay ahead of the ever increasing and numerous environmental regulations and enforcement activities.

Army environmental compliance funding has been increased for fiscal year 1991. It is $364 million, up $50 million from fiscal year 1990. The expected amounts for fiscal years 1992 and 1993 are $507 million and $484 million, respectively. In an era of budget reductions, you can see that our environmental compliance funding is increasing.

In regard to Army's installation restoration program, the priority is on contamination clean up as expeditiously as we can. In fiscal year 1990, the Army spent $186 million of the Defense Environmental Restoration Account funds to investigate and remediate active Army sites. An additional $59 million of DERA funds was spent for formerly used defense sites, which we refer to as the FUDS program, which Army manages as an executive agent for the Department of Defense.

In fiscal year 1991, the Army will spend $287 million for the active sites program, and $88 million for the formerly used sites. In fiscal years 1992 and 1993, active sites amounts of funds are expected to increase to $322 million and $312 million, respectively. The former sites program for those years are expected to increase to $124 million and $198 million, respectively.

With reference to our bases being closed, our goal is to expeditiously clean up, if necessary, in order to transfer the land to local beneficial use as quickly as possible.

In summary, Mr. Chairman, the Army has several initiatives underway to place greater emphasis on environmental compliance and environmental restoration. These initiatives reflect the Army's strong commitment to protecting, preserving, and enhancing the environment. The program is moving forward and efforts will continue to focus available resources to achieve the environmental goals set forth by the Army and the DOD leadership.

That completes my summary, Mr. Chairman. Thank you.

[The prepared statement of Mr. Walker follows:]

PREPARED STATEMENT OF LEWIS D. WALKER, DEPUTY ASSISTANT SECRETARY OF THE ARMY, (ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH)

ENVIRONMENTAL COMPLIANCE AND CLEANUP

Mr. Chairman and members of the committee: I am pleased to appear before you today to discuss the Army's policies and programs in the areas of environmental compliance and environmental restoration.

ENVIRONMENTAL COMPLIANCE INITIATIVES

The Army's goal is to be a leader among Federal agencies in environmental compliance. An environmental ethic has been established and is being integrated into all activities. The challenge is to get ahead of the explosion of environmental regulations and enforcement activities. Despite our best efforts we have not been successful in achieving sustainable compliance at our installations. For 1,266 properties of which 190 are major installations, the Army received a total of 173 notices of violations (NOVs) in fiscal year 1990. This is an increase compared to 129 and 160 for fiscal years 1988 and 1989, respectively; but is less than the peak year (218) for fiscal year 1987. The majority of the citations in the NOV's are for administrative deficiencies.

Despite the appearance of a worsening environmental compliance record, the Army has already completed or is in the process of addressing several significant initiatives to improve the environmental compliance posture under the umbrella of the environmental compliance achievement program (ECAP). We anticipate these will pay substantial dividends in the future.

The following actions in fiscal years 1990 and 1991 have been completed:

— Army regulation AR 200-1, environmental protection and enhancement, was updated to include new environmental requirements.

— A major Army environmental policy memorandum has been published jointly by the Secretary of the Army and the Chief of Staff of the Army which established top Army leadership commitment to environmental compliance.

— An updated revised commander's guide to environmental management has been published which is designed to provide commanders information on their environmental responsibilities.

— The Army has established an Army environmental policy institute to provide long range strategic planning for future environmental requirements.

— A senior executive environment council has been established to bring top leadership to bear on fixing environmental problems.

— The Army has adopted a "must fund" policy for those class I environmental requirements which either are necessary to achieve regulatory compliance or which must be done to meet terms of an enforceable document such as a Federal facility compliance agreement or a consent order.

— An environmental response and information center has been established to identify and monitor notices of violations in an effort to bring affected installations back into compliance as soon as possible.

— Increased funding has been identified for ECAP. Environmental compliance funding for fiscal year 1991 is $364 million, up $50 million from fiscal year 1990. The expected amounts for fiscal years 1992 and 1993 are $507 million and $484 million, respectively. In an era of budget reductions, environmental compliance funding is increasing.

— Policy guidance has been issued to preclude migration of environmental funds to other programs.

In addition to the completed actions, the Army has several other initiatives underway to address systemic problem areas:

— Personnel staffing is one of the Army's most serious problems. A staffing study is underway to identify valid staffing standards for environmental professionals.

— An Army environmental training master plan is nearing completion to improve environmental training across the board.

— An Army environmental compliance assessment system will receive funding in fiscal year 1992 to start a comprehensive program to identify deficiencies and needed corrective actions at Army installations.

— Pollution prevention is being aggressively addressed in the acquisition community with a multi-disciplinary team of experts working with individual program executive officers (PEOs)/Project Managers (PM) to review and minimize the need for hazardous materials in development, operation and maintenance of new systems.

In addition to the above, the Army is also evaluating its present organizational structure to best support the installations in complying with environmental AWS.

The ECAP program has integrated the planning and programming functions with the budget execution steps. The first step in the process starts with Army installations identifying requirements in the DD 1383 report. The consolidated Army input forms a work plan of projects categorized by class I, class II and class III based on the Environmental Protection Agency definitions. The total amount of funding to execute the projects is rolled into the budget request. In fiscal year 1991, 4,790 projects ($364 million) were identified with slightly over 35 percent (1,726) being class I projects which are "must fund" projects. Progress on obligations is tracked quarterly in the planning, programming, budgeting and execution review system. In addition a work plan is being developed to track execution of class I projects.

The Army policy is to continue to enter into Federal facility compliance agreement with regulatory agencies when installations cannot be brought into compliance within a 30-60 day period. In fiscal year 1991, we presently have over 30 agreements or consent orders at Army installations.

During fiscal years 1989 and 1990, the Army conducted 43 environmental audits at Army installations. These audits identified 1,918 deficiencies of which 34 percent were administrative in nature, 51 percent were operational problems and 15 percent required projects. Beginning in fiscal year 1992 an environmental compliance assessment system will be funded to intensively audit Army installations.

INSTALLATION RESTORATION PROGRAM

In fiscal year 1990 the Army spent $186 million of Defense Environmental Restoration Account (DERA) funds to investigate and remediate active Army sites. An additional $59 million of DERA funds was spent for Formerly Used Defense Sites (FUDS), which Army manages as executive agent for Department of Defense. In fiscal year 1991, the Army will spend $287 million for active sites and $88 million for FUDS. In fiscal years 1992 and 1993 active site amounts are expected to increase to $322 and $312 million, respectively. FUDS amounts for fiscal years 1992 and 1993 are expected to increase to $124 and $198 million, respectively.

The Army currently has 32 installations on the National Priorities List (NPL). Priority for the DERA funds goes to those installations with category 1 cleanup problems. It is both DOD and Army policy to negotiate Federal Facilities Agreements (FFA) with the Environmental Protection Agency (EPA) and the States for each of our installations on the NPL. Thus far, the Army has signed 26 FFA at active Army sites negotiations in various stages of completion for the remaining six installations.

As of the end of fiscal year 1990 10,477 active Army sites have been identified as needing study for potential contamination. Army has determined that no further action is needed at 5,035 sites. Remedial actions have been completed at 135 sites. At the end of fiscal year 1990, there were 1,675 sites in some phase of clean up compared to 1,021 sites in the previous fiscal year.

In the FUDS area 6,980 sites have been identified of which 3,830 have been inventoried as of December 31, 1990. A total of 85 remedial actions have been completed with another 572 sites in some stage of evaluation or cleanup.

The DERA is being used to fund $5.4 million in research and development demonstration projects in fiscal year 1991. In addition, DERA will fund $8.9 million in hazardous waste minimization projects in fiscal year 1991.

BASE REALIGNMENT AND CLOSURE (BRAC) ACTIONS

At BRAC sites the Army's policy is to ensure that environmental contaminants in the groundwater or present in the soils are treated, contained, eliminated or managed to comply with health or environmental standards. The Army's goal is to accomplish land disposal actions with no restrictions on the properties' future use. If transferred to another Federal agency, the Army will take the lead for all restoration studies and investigations.

At sites outside the continental United States (OCONUS), the Army has developed an OCONUS environmental restoration protocol applicable at those sites to be vacated and returned to the host country. Facilities being returned to the host nation are being screened to ensure that any problems requiring class I projects are identified and funded. Class I projects in this case are those that are necessary to protect against imminent danger to human health or the environment or that are necessary to meet substantive U.S. Federal or host nation law. When the installation is being prepared for turnover to the host nation, class I actions that are known but have not yet been corrected will be made known to the host country.

Hazardous materials and hazardous waste will be removed and properly disposed of prior to the joint U.S./host nation inspection.

Finally, an Environmental Status Report (ESR) will be prepared for each installation that is to be turned over to the host nation. The ESR will document the environmental conditions at the installation and will be developed from known information, and generally not through new studies. The ESR would also contain a determination of the significance of the environmental impacts associated with the turnover of the installation to the host nation, and any analysis must be prepared in connection with the installation turnover. The ESR would be used by U.S. negotiators during residual value negotiation with the host nation.

Funding for base closure activities in the continental United States comes from a new Base Closure Account (BCA). In fiscal year 1991, the BCA contains $50.4 million for Army to fund environmental cleanup costs at 27 BRAC I installations. The funding increases to $122 million for fiscal year 1992. The total projected cleanup costs for BRAC I installations is $308 million but does not include estimates for removal of unexploded munitions and environmental restoration of range areas.

For OCONUS facilities there is no BCA or DERA available to fund closure cleanup. Consequently, environmental restoration overseas is funded from the Army's Operations and Maintenance Account (OMA).

SUMMARY

The Army has several initiatives underway to place greater emphasis on environmental compliance and environmental restoration. These initiatives reflect the Army's strong commitment to protecting, preserving and enhancing the environment. The program is moving forward and efforts will continue to focus available resources to achieve the goals set forth by the Army and DOD leadership.

Senator DIXON. I thank you, Mr. Walker.

Mr. BACA. Mr. Chairman, if we could have Mr. Gary Vest, Deputy Assistant Secretary of the Air Force.

Senator DIXON. Mr. Vest.

STATEMENT OF GARY D. VEST, DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE, ENVIRONMENT, SAFETY, AND OCCUPATIONAL HEALTH

Mr. VEST. Thank you, and good morning. The Air Force has restructured its environmental program around four primary thrusts, past, present, future, and culture change. Today, in terms of overall status, the Air Force has in place the policies, the programs, the procedures and methodologies, and the integration into the mainstream of the Air Force of the environmental program. We have an adequate number of good to exceptional people out there doing the environmental program.

And perhaps most importantly we have a substantially increasing funding stream. For example, in fiscal year 1990 our total environmental program in the Air Force was $446 million. In 1991, we are working on a $660 million program which I anticipate to exceed three quarter of a billion dollars by the end of the fiscal year. Our current budget estimates for fiscal year 1992 exceed $1 billion in the Air Force for its total environmental program. And I would anticipate, in order to do what we have to do for the remainder of this century, that in 1993 or 1994 we will have to reach a $1.5 billion to $1.8 billion per year funding level to meet our environmental obligations.

In a military organization, perhaps one of the most important things is the commitment of the leadership. Two months ago Air Force Chief of Staff Tony McPeak communicated to his four star commanders environmental leadership. He established a set of goals, and I am here to tell you from visiting the field that those goals are recognized and they are being worked on by the entire blue suit leadership of the U.S. Air Force.

In terms of the past, General McPeak informed his commanders that he wanted to restore at least 10 percent of our hazardous waste sites annually, with all sites to be completed by the year 2000. We have 4,513 sites. To date we have spent $1.3 billion on those sites. To finish we need an estimated $6.8 billion. We are going to finish 33 percent of those sites by the end of this year. We estimate it will take a funding level of $700 million to $900 million a year through the remainder of this century, starting in 1993, to meet that goal.

We have a bias for action in that program. In fiscal year 1990 we had 32 percent of our budget in remedial design and remedial action. By 1992, we anticipate having 60 percent of the budget in that category.

General McPeak, when speaking to compliance, told his commanders that we are going to, and I quote, "ensure our present operations comply with all Federal, State, and local environmental standards. No notices of violation is the measure of merit." We have done a number of things to begin to make good on that goal. We have established environmental compliance offices at the regional level to work with the regulators. We know and have coordinated with the regulatory community how many open violations we have at any one time and the exact status of those violations. We have our internal environmental audit program, and in the last 2 fiscal years we have conducted on the average about 90 of those internal audits at our installations.

In terms of environmental compliance funding, in fiscal year 1991 we are working on a $226 million budget (excluding manpower). In 1992, we are programmed for $533 million (includes $64 million estimate for manpower), and in 1993 we are looking at approximately $450 to $500 million.

In terms of the future, the chief told his commanders, prevent future pollution by reducing the generation of hazardous wastes to as near zero as possible. We are well on our way to achieving that. We have, as Mr. Baca established a few moments ago, a goal of 50 percent reduction by 1992. Since 1986, we have already achieved a 28.5 percent reduction in the generation of hazardous waste.

We are deeply committed to changing the acquisition process. Working now for nearly 3 years in earnest on that, we believe that the Advanced Tactical Fighter program will in fact serve as the model for the full integration of environment, safety, and occupational health into the weapons acquisition process.

Mr. Chairman and members of the committee, the Air Force is committed, the Air Force is deeply committed, and perhaps the real measure of that is the commitment of the leadership and the performance that you are seeing now and you will continue to see in the Air Force. Thank you very much.

[The prepared statement of Mr. Vest follows:]

PREPARED STATEMENT OF GARY D. VEST, DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE (ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH)

Mr. Chairman and members of the committee, I am pleased to have the opportunity to discuss Air Force environmental cleanup and compliance budgets. Let me begin by describing the three major emphasis areas of our environmental program. First, the Air Force is addressing those actions we need for compliance with present laws. Compliance is our number one priority; it is not optional—it is an obligation. Second, the Air Force Defense Environmental Restoration Program focuses on past hazardous waste practices through the cleanup of contaminated sites. Third, we have made a conscious effort to dedicate part of our program to preventing situations which could lead to non-compliance with environmental laws and regulations. Our investment in the future through research and development, pollution prevention, hazardous material and waste minimization will pay big dividends to the Air Force and the Nation.

The Air Force has worked hard to fully integrate environmental concerns into the mainstream of our operations. This is not an easy task. Just as our country has become more environmentally conscious over the past 20 years, so has the Air Force. We are raising the awareness of our senior leadership and commanders. In April 1990, we began bringing our general officers and installation commanders to our Commander's Environmental Leadership Course to reemphasize environmental concerns and to reinforce our goal of full environmental compliance. A total of 76 senior officers attended the courses conducted in fiscal year 1991. More than 150 Air Force commanders and senior leaders are expected to attend the four conferences scheduled for fiscal year 1991. We have also been conducting a number of courses to educate our junior-level leaders throughout the Air Force on the technical, financial and procedural aspects of compliance. Many of these efforts have Federal, State and even local regulatory participation. The Air Force is maintaining its readiness posture while becoming increasingly sensitive to environmental requirements.

ENVIRONMENTAL COMPLIANCE

I would like to reemphasize the statement I made earlier that environmental compliance is our number one priority. I believe the Air Force's compliance with environmental regulations is actually quite good. However, we are not satisfied with our record and we are working hard to have a superb compliance rate. The Air Force is large with many installations scattered throughout the United States and inevitably we will receive some Notices of Violation (called NOVs) in spite of our best efforts to achieve full compliance.

This past year has been a period of major evolution within the Air Force environmental compliance program. Our primary goal is to identify and fix non-compliance items. Our corollary goal is to anticipate new requirements and to plan, program, and budget accordingly.

Inherent in these goals is the ability to quantitatively measure the Air Force's compliance status with current laws and regulations. The Air Force achieved a major milestone this past year with the establishment of our Regional Environmental Offices (REOs) in September 1990 to provide coordination and interface with Federal, regional and State agencies. The REOs provide us the capability to accurately track compliance status at the regional or State level, to discern trends and problem areas, and to identify solution sets through management practices, training, and facility projects.

The Regional Offices are located in Atlanta, Dallas, and San Francisco and are networked with the State and the Environmental Protection Agency regional offices in proximity. Together, they serve to interface closely between Air Force major commands and local/State/Federal regulators to validate each open enforcement action and to assist in closing out any item for which the Air Force deems corrective action to be complete. Assistance is also rendered as necessary to achieve compliance agreements between bases and regulators, and quarterly compliance reports are prepared to apprise Air Force leadership of compliance status and progress in achieving compliance.

December 1990 marked a major Department of Defense milestone when the Air Force presented the first service accounting of its complete compliance status. Not only did it achieve the goal of quantifying the compliance story, but of equal significance met a joint objective with the EPA to present a DOD/EPA validated inventory of compliance data. We are very grateful to EPA and the States for their cooperation in this effort. We are continuously reviewing and updating our compliance status and preparing comprehensive quarterly updates. The report for the 2nd quarter of fiscal year 1991, presented through Air Force channels to me in April, identified a total of 205 open enforcement actions (average of 1.6 per base). Corrective actions are complete on 70 of these open items, and we are working with the regulators to get these off the books. Corrective actions on the remaining open enforcement actions are underway. Closer scrutiny shows 77 percent of the enforcement actions fall within the hazardous waste and water media. Specifically:

— Hazardous waste constitutes 47 percent of the total, with labeling deficiencies, training records and training being the most cited problems.

— Water violations comprise another 30 percent of the open actions, primarily due to aging sewage and industrial wastewater treatment facilities and to tougher standards being imposed.

— Thirteen percent of the open actions fell within the air media, attributable to inadequate emission controls and more stringent regulatory standards

— Another 4 percent of the deficiencies were cited in the drinking water category, mainly due to well construction and equipment maintenance.

— The remaining 3 percent fell within toxic substances, with deficiencies primarily in PCB storage, handling, and recordkeeping.

The REOs therefore added another weapon to an Air Force environmental arsenal that already included the Environmental Compliance Assessment and Management Program (ECAMP). ECAMP remains a fundamental tool in identifying and correcting our compliance problems. As a self-evaluation, ECAMP provides the installation commander an assessment of the health of his program, identifies areas requiring commander focus, and provides a basis for developing a get well program. During fiscal year 1989, ECAMP provided 4,330 findings from the 87 installations evaluated. The fiscal year 1990 ECAMP identified approximately 4,027 findings from 85 installations evaluated. Similar to our Notice of Violation trends, ECAMP results indicate that over 50 percent of our findings are in the hazardous materials/waste area. I would also like to point out that the Air Force is expanding ECAMP to include overseas installations. ECAMP remains a viable and dynamic tool in the Air Force quest for compliance.

Trends and problem areas identified through our new compliance reporting process and the ECAMP have allowed us to identify the substandard/decaying components of the Air Force's infrastructure that are driving many of the enforcement actions. Specific initiatives are being undertaken to identify systems now out of compliance and those that will noncomply as more stringent standards are applied. We will identify facility projects necessary to achieve and maintain compliance, and ensure they are considered in the budget process. Initiatives are now underway to assess our wastewater treatment systems, hydrant refueling systems, corrosion control (paint) facilities, fire training pits, and underground storage tanks (UST).

ENVIRONMENTAL COMPLIANCE FUNDING

The Air Force is aggressively pursuing budgeting and accounting system changes to provide more visibility of the funds being spent for environmental compliance. The Air Force is proud of its Environmental Compliance program and its accomplishments over the past year to improve the programming and budgeting of these requirements. Environmental compliance requirements span the Air Force budget with funding in appropriations such as Operations and Maintenance, Military Construction, procurement, RDT&E, Equipment, Military Family Housing, AF Reserves O&M, Air National Guard O&M, and the Base Closure Account as well as Industrial-funded activities.

Foremost among last year's achievements was the development and implementation of a series of cost accounting changes to enable tracking of environmental compliance expenditures within the Operations and Maintenance Account (by far the largest single source of environmental compliance funds). In addition to providing expense data by environmental media, these changes will allow visibility of the Air Force environmental compliance O&M budget which in prior years was a nonspecific portion of the AF Operations and Maintenance request. These changes were implemented in October 1990 for cost accounting in fiscal year 1991. Tracking systems were also implemented in most of the other appropriations; the few remaining are currently building similar systems to be implemented in the near future.

The Air Force budgeted $469 million in fiscal year 1992 and $376 million in fiscal year 1993 to meet its environmental compliance requirements. This level of funding represents over 100 percent growth over that budgeted in fiscal year 1991. These budget figures are exclusive of environmental manpower which is estimated at $64 million and $74 million in fiscal year 1992 and fiscal year 1993 respectively. Environmental manpower funds remain in the O&M budget, but are being identified and transferred for future budget submissions. The current budget request includes funding required to cover all recurring environmental operations and services such as hazardous waste disposal, environmental permits and fees, and underground storage tank leak testing. The budget fully funds all known requirements necessary to correct situations which are currently out of compliance to include a $44 million cleanup of a currently operating RCRA unit at AF plant 44 in Tucson, AZ and the $22.5 million Air Force share of the construction of the McGuire/Fort Dix Sewage Treatment plant. Finally, the budget fully funded all known requirements necessary to address situations which meet current standards but which face a compliance deadline in the future; this includes the phased leak testing and upgrade of underground storage tanks and compliance agreements reached with regulators.

As environmental compliance is very dynamic, requirements emerging after the current budget was constructed may or may not be covered within the environmental compliance account. New regulations, increased scrutiny by regulators, and improved internal identification efforts continue to increase the demand for environmental funding. If "must-pay" requirements exceed that which is budgeted, then additional funds will have to be obtained from other Air Force accounts.

The current fiscal year 1992 and fiscal year 1993 Air Force compliance budget does not fully fund all environmental requirements. Requirements that are not out of compliance and which are not tied to current compliance deadlines, such as waste minimization, pollution prevention, and many natural/cultural/historic resource requirements, are not fully funded. Some investments in these areas have been made, mostly in the Equipment Appropriation and in the Defense Maintenance Industrial Fund. We are currently developing a comprehensive Air Force Pollution Prevention Program. The program will be implemented later this year and will allow us to systematically evaluate all Air Force installation's pollution prevention opportunities. The requirements we identify in this process will form the basis of our future budget requests in this important area.

The Air Force's Tactical Air Command has the lead agency role and Langley AFB is our test base for developing pollution prevention initiatives as a part of the joint DOD/EPA model community pollution prevention program. The model community in the Tidewater, Virginia area includes Langley, Fort Eustis, Norfolk Naval Base and NASA and is called the Tidewater Interagency Pollution Prevention Program (TIPPP). The goal of this 3 year program is to eliminate pollution through innovative waste management and source reduction rather than conventional techniques to clean up after the fact. Products will include transferable work plans and guidelines for use at other military installations.

Also, at Tinker AFB in Oklahoma we are developing a model program for our industrial bases which as you know contain some of our most challenging pollution prevention problems and hazardous waste cleanup requirements. This initiative establishes a partnership with EPA Region 6, the State of Oklahoma and Tinker AFB to commit to a cooperative comprehensive environmental strategy encompassing environmental restoration processes, to develop multi-media compliance, and to establish pollution prevention programs at Tinker AFB. In this leadership role for Federal facilities, Tinker AFB will serve as a model installation and test bed to demonstrate and implement innovative technologies accelerating cleanup action for areas of contamination within the required time frames. In addition, Tinker AFB will implement the necessary technologies to expedite the pollution prevention goal of zero discharge of hazardous waste and other pollutants at the source by the year 2000. This is a partnership and all parties have pledged their support to work toward the common goals of quality and progress in enhancing Federal facility cooperation and compliance.

Another achievement within the past year was the development and implementation of a new environmental manpower standard. This standard, the product of an intensive study, incorporates new manpower factors and results in an average increase of 24 percent additional manpower available to installations. The Air Force compliance budget does not yet contain the funding associated with environmental compliance manpower. This funding, approximately $64 million in fiscal year 1992, will be transferred to the compliance budget following an ongoing exercise to identify all compliance personnel in the Air Force manpower database.

As represented by the fiscal year 1992 compliance budget, the Air Force is committed to environmental quality. We are proud of this commitment and not only strive to be recognized as the environmental leader among Federal facilities, but throughout the world.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

I would like to turn now to our efforts to clean-up contamination from past disposal practices. In order to become more aggressive in our cleanup approach, we have begun placing greater emphasis on closing out our sites and getting them off the books. In December 1989, we set a goal of completing 20 percent of our sites in fiscal year 1990. We only completed 12 percent, but we were pleased with the progress since we had established the goal late in the fiscal year and we knew it would take some time for the system to react. Many of the sites in the 12 percent did not require long-term remedial actions to close them out and by getting these sites off the books, we were able to concentrate on the more important sites.

In September 1990, we established a goal of 30 percent cleanup for fiscal year 1991 and a 100 percent goal for the year 2000. I am confident that we will reach our 30 percent goal this year. At this point I would like to clarify what we mean by "our 100 percent goal for the year 2000." Cleanup in terms of this goal means a decision for no further action has been made, or a remedial action has been completed, or a remedial action has been initiated but will require several years of operation. We anticipate about half of our sites will need remedial action. We know those sites will require the long term (20–30 years) operation of cleanup systems, but we want to have those systems in place and operating by the year 2000. Once it is determined the cleanup effort for a site has been completed, we prepare a decision document which outlines the activities we have taken and why no further response action is planned (NFRAP). We will have decision documents for all of our 4,513 sites completed in the year 2000.

In addition to placing a greater emphasis on closing out sites, we are also changing our investment strategy to reflect our bias for action. In fiscal year 1990, we spent $56 million 32 percent of the Air Force DERP funds for remedial design and remedial actions. In fiscal year 1991, we anticipate spending $185 million or 46 percent for remedial design/actions. In fiscal year 1992, we will strive for that percentage to reach 60 percent. We will continue to fund the investigations and studies, but we anticipate that we can reduce the time and cost of these efforts.

We have challenged our people to find and eliminate the existing impediments to progress in our restoration program. This does not mean we will not follow the appropriate regulatory guidelines or the recommendations of the regulatory agencies.

We will, however, take advantage of those opportunities which would allow us to get to the cleanup phase quicker. One example is accomplishing focused remedial investigations/feasibility studies which take advantage of previous studies. The cleanup effort in this country is no longer in its infancy. There is a great deal of information on closed sites available in the Federal and private sector, such as municipal landfills, which can be used to our advantage. We should be able to adapt proven cleanup alternatives which have been selected for similar contaminants and site conditions without treating each site as a completely new situation. This approach will allow us to characterize the site conditions, select a previously approved technology and move quickly to cleanup.

We are also working with the EPA and States on jointly assuming more risk in making decisions on cleanup. For example, we should be able to initiate an interim remedial action (IRA) instead of waiting for a perfect RI/FS to be completed. Initiating interim remedial actions early in the process will allow us to arrest the migration of the contamination and achieve cleanup more expeditiously.

There are two specific initiatives I would like to highlight at this time. We are working, with the help of Congressman Ray, with EPA Region IV and the State of Georgia to identify the specific actions necessary to expedite the cleanup process at Robins Air Force Base. I am very optimistic on the progress of these discussions and am confident they will save both time and money in the long run. We are also working with EPA Region VIII to develop other ideas or process changes to expedite the cleanup process.

Of continuing concern to the Air Force are the problems in reconciling the different cleanup approaches, cleanup standards, cleanup priorities, and jurisdictional aspects of RCRA's "corrective" action and Superfund's "remedial" action. At times it remains unclear at the installation level what process will govern and who is in charge, or whether we will potentially be subjected to both processes and control led by both State and EPA regulators at the same site at the same time. Currently, sites can legally be cleaned up under CERCLA or even closed, only to be reopened under RCRA. There is potential for wasted efforts through regulatory second-guessing. Regardless of which regulatory authority is in charge, we would like to proceed with cleanups on our installations using one agreed set of processes, cleanup standards and priority-setting mechanisms. We want to get on with cleanup and make the best use of our cleanup dollars.

On another front, we want to expand the number of acceptable technologies which are available to clean up our sites. We are concerned that there are only a limited number of technologies in use today. We are attacking this problem by teaming up with the other services and EPA. We are working with the other services to catalog by site type and site characterization the "acceptable" technologies which should be considered. This will enable installations preparing feasibility studies to focus on "proven" technologies without having to analyze the whole universe of technologies available. This approach will not preclude the consideration of a promising technology, but will usually require the analysis of that technology for cost and performance before it is included in a feasibility study. EPA and the Air Force are working together to apply promising technologies to Air Force contamination cleanup activities. We have set aside $1 million for this effort. We also plan to utilize EPA's laboratory capabilities in evaluating the technologies we are demonstrating at Air Force sites.

In the other hazardous waste activities, we are using DERP funds as a catalyst for establishing plans, procedures and for evaluating promising equipment for hazardous waste minimization. These efforts represent only about 4 percent of the Air Force DERP funding, but we are making a valuable investment in the future.

We are also concerned with our ability to recruit trained personnel for our cleanup effort. To address this concern, we have established a central education office at the Air Force Institute of Technology at Wright-Patterson AFB, Ohio. This office will evaluate the available courses, symposiums and workshops sponsored by the Federal Government and private organizations to determine which ones can best suit our needs.

Public and community participation play a major role in the implementation of the Installation Restoration Program. Public involvement is mandated by a number of Federal laws and requirements including the Comprehensive Environmental Response, Compensation, and Liability Act, the National Contingency Plan, Resource Conservation and Recovery Act, and the National Environmental Policy Act. At this time there is no comprehensive training program available to ensure Air Force environmental staffs are familiar with these requirements as they pertain to IRP actions. To fill this public affairs void in our program, we have initiated a joint Air Force/EPA public affairs environmental training program. The program will include a 4-day Air Force/EPA Public Involvement training course, and Air Force Public Affairs Environmental Handbook with internal educational materials. We believe this initiative will assist commanders and other environmental decision makers to make informed decisions regarding Installation Restoration Program public involvement issues.

FEDERAL FACILITY AGREEMENT STATUS

Our policy is to negotiate an interagency agreement as soon as possible after a site is proposed for the National Priorities List or NPL. This is based upon our desire to conduct work with the maximum amount of input from the public, the States and EPA. The other objective of these comprehensive agreements is to ensure that at remedy selection, all parties will be able to support the same remedy.

The Air Force has 31 bases listed on the NPL. We have signed a two-party agreement at Twin Cities AFRB and 23 party agreements. Six other agreements are very close to completion. The remaining four agreements are expected to be completed by the end of 1991.

We are also working directly with the States on non-NPL sites as well. In California, we have negotiated a comprehensive agreement to address the cleanup of all contaminated sites at Vandenberg AFB following the National Contingency Plan (NCP) process. We and the State of Washington are negotiating a similar non-NPL agreement covering sites on McChord AFB.

BASE CLOSURE

Environmental requirements at closure installations are of prime importance in the Air Force environmental program. The fiscal year 1992 and fiscal year 1993 base closure account includes $50 million and $32 million, respectively, to address Air Force base closure environmental requirements. This account includes all known restoration costs as well as all "must-pay" compliance requirements.

At this point I want to identify a potential problem we are currently addressing that could, if not resolved, prevent or delay orderly disposal of base properties. This concerns varying interpretations of CERCLA section 120(h) and related provisions of CERCLA/SARA and the National Contingency Plan (NCP). One possible, but unnecessarily stringent, interpretation of these authorities is that individual parcels of property, located within the boundaries of a large military installation which has been designated by EPA as a National Priorities List (NPL) site, cannot be transferred (either by interim lease or by deed), unless and until the entire NPL site has been fully cleaned up. This "clean it all first" interpretation would effectively prevent any disposal action, for either clean or cleaned-up parcels. At closure bases, full remedial actions could take 20 to 30 years especially if cleansing of contaminated groundwater is necessary. Two adverse effects would ensue from application of this interpretation: first, the economically productive reuse of the property, to offset the loss of jobs brought about by base closure in the communities surrounding the installations, would be thwarted—causing undue additional hardship—and second, the sale of military land to generate revenue, as directed by Congress (to defray costs of such closures), would be considerably delayed or prevented altogether. In addition, the Air Force would continue to incur costs associated with protection and maintenance of installations during this prolonged period.

The Air Force believes that such an unacceptable result is both unwarranted and unnecessary to the accomplishment of the ultimate goal of environmental cleanup in a lawful manner. Another interpretation of the statutory and regulatory authorities has been recommended by our General Counsel and generally accepted by the first two EPA regions to come to grips with these knotty issues. Under it, clean or cleaned-up parcels can be transferred, by interim lease or deed, to viable reuse activities sponsored by local development authorities. Where clean parcels have underlying contaminated groundwater, they can still be transferred for reuse, subject to restrictive terms in their deeds or leases, to assure the Air Force and regulatory agencies full access to the property for future remedial actions or monitoring, as well as to prohibit use of the groundwater until it has been cleansed. We are working closely and cooperatively with the Environmental Protection Agency at the Regional and Washington headquarters levels to have this approach adopted nationwide.

A good practical example of the paradox created by a strict application of CERCLA and the NCP and the desire of the Air Force to promote rapid redevelopment of our closure bases can be found at Norton AFB. Lockheed Corporation, in partnership with Japan Airlines, proposed interim reuse of a maintenance hangar at Norton AFB to do overhaul work on 747s. The 600 jobs created would be a real boon to the local economy. However, in order to use the hangar, Lockheed must first replace the floor slab which overlies contaminated soil. The Air Force has defined this contaminated soil site as an "operable unit" and is proceeding with a "time critical removal action" under CERCLA section 104 and the NCP. We have coordinated this innovative approach extensively with the State and EPA Region IX and have met all of their technical concerns. However, as stated above, a stricter interpretation of CERCLA and the NCP would not allow us to proceed with this approach. With additional base closures on the horizon, we are likely to face similar situations or reluctant regulators again. We hope that the potential delays or roadblocks suggested above can be avoided. However, should it not be possible to resolve these issues in a satisfactory and timely manner, or obtain swift legislative relief to get us past such legal hurdles, we expect potentially adverse economic impacts on both the local communities involved and the Federal budget.

It is clear we share a common goal with the States, the communities, and Congress. This goal is to clean up our contaminated sites so that properties can be transitioned to economically productive civilian use as soon as possible. We believe our proposals would permit us to achieve this goal. I want to emphasize that these problems cannot be solved by governmental dictates or edicts to clean up within fixed time periods. Each situation is different and is best handled on a site specific basis with the affected stakeholders balancing the community interests of health, environment and economic well-being.

CONCLUSION

In conclusion, we are proud of the progress we have made in cleaning up our hazardous sites and improving our compliance program. The Air Force's environmental program is both expanding and becoming more complex due to growing regulatory requirements. We recognize that an increasing level of resources is necessary to carry out our environmental responsibilities and have taken steps to help ensure these resources are available. Our new compliance tracking system, leadership oversight, the Commander's ECAMP program, and special project initiatives form the foundation of the Air Force's dynamic program to achieve environmental compliance. These initiatives and the many others I have addressed are integral to the Air Force's continuing commitment to environmental excellence.

Senator DIXON. I thank you, Mr. Vest. Mr. Reitman, you are last, but not least, sir.

STATEMENT OF JAN B. REITMAN, DIRECTOR OF THE ENVIRONMENTAL POLICY OFFICE, DEFENSE LOGISTICS AGENCY

Mr. REITMAN. Yes, sir. Thank you. I am Jan Reitman, Chief of the Environmental Division of the Defense Logistics Agency. I appreciate this opportunity to appear here today. I am providing a statement for the record which provides background information about my agency, including our size and mission and the number of installations for which we have environmental management responsibilities.

My statement explains that we have an active environmental compliance program with some 570 positions devoted to the different facets of environmental management. The majority of these positions are concerned with the disposition of hazardous materials and waste generated by the military services.

For fiscal year 1992, we have developed budget requirements which total $71.2 million for environmental compliance. These total agency requirements include expenditures in the defense business operations funds and our O&M accounts. We have developed a scoring system to prioritize our requirements. The system directs that the highest ranking be given to projects needed to comply with the most essential environmental requirements. As explained in my statement, we have implemented an aggressive environmental audit program to help identify what our high environmental requirements in fact are.

With regard to environmental restoration, our total requirements for fiscal year 1992 are estimated at $41.4 million. This represents for us a sharp increase from previous levels of funding as a result of growth in the installation restoration area. For example, our installation restoration funding has increased by $28.3 million between fiscal year 1990 and what we expect to spend in fiscal year 1992.

This increase reflects first, expected movement of several of our projects from the investigation stage to the clean up stage, second, the transfer of depots from the military services to DLA as part of the depot realignment effort, and third, increased potential involvement in potential responsible party sites which are owned and operated by private parties. Some recent specific examples of these projects are described in my statement.

In conclusion, I do believe that we have a good environmental program within my agency. We certainly try very hard. We try to ensure that funds are spent in an intelligent manner and are applied against valid high priority needs. Thank you, sir, that concludes my statement.

[The prepared statement of Mr. Reitman follows:]

PREPARED STATEMENT OF JAN B. REITMAN, DIRECTOR OF THE ENVIRONMENTAL POLICY OFFICE, DEFENSE LOGISTICS AGENCY

Mr. Chairman and members of the subcommittee, I am Jan Reitman, Chief of the Environmental Division at the Defense Logistics Agency and I appreciate this opportunity to describe the DLA Environmental Compliance and Restoration Programs. Today I will address the defense logistics agency mission, and tell you about our resources and key programs. I will summarize our programs and recent accomplishments in environmental restoration and environmental compliance.

BACKGROUND

First let me remind you that DLA was established to provide logistical support to the military services, DOD components, Federal agencies, and foreign governments. As an agency of DOD, we operate under the direction of the Assistant Secretary of Defense (Production and Logistics), and work in conjunction with the military services as well as the Joint Staff. The JCS reports to Congress every 2 years on DLA, and DLA briefs the Chairman of the Joint Chiefs twice a year.

DLA is the largest of the Defense agencies with about 61,400 personnel, of which over 1,400 are military. Most of our field activities are tenants on installations owned and operated by the military services or leased facilities from GSA. DLA is directly responsible for facility operations, including Environmental Compliance Programs, at nine major installations. This includes the depot at Sharpe, CA, which was transferred from the Army last year due to the depot consolidation effort. It also includes the new Cumberland depot, which was similarly transferred from the Army to DLA management on April 14 of this year. DLA also has environmental management responsibilities at a number of tertiary level activities, including 19 bulk petroleum storage and distribution sites and 13 defense national stockpile sites.

ENVIRONMENTAL COMPLIANCE PROGRAM

With regard to environmental compliance, we have programmed, budgeted, and plan to fund requirements which total $71.2 million in fiscal year 1992, including $52.4 million for U.S. locations and $18.8 million for overseas locations. These total agency environmental compliance requirements include expenditures in the Defense Business Operations Fund and Operation and Maintenance Accounts. It is our policy to promptly fund the most essential environmental requirements. For example, guidance provided to our field activity commanders includes a system for ranking proposed projects. This system directs that the highest ranking be given to projects needed to comply with most essential environmental requirements. With regard to staffing, we have about 570 employees devoted to environmental compliance programs, 78 of which are for overseas activities. Approximately 500 of these positions are related to DOD hazardous waste disposal activities.

DLA has an active environmental audit program to find and fix environmental compliance problems. Multi-disciplinary environmental audit teams visit DLA-managed installations every 3 to 4 years to determine compliance status and to work with base commanders in correcting problems. Our audit programs have developed about 700 recommendations since the program, was initiated in 1985. In addition to the audits, we conduct annual spill simulation exercises at depots used for hazardous material storage. This has proven to be a useful method for measuring spill response effectiveness and highlighting training and equipment requirements. We also have an active program to conduct internal compliance audits at all DRMOs in CONUS and overseas and a total of 1,171 findings and recommendations were developed. In addition, DLA-managed installations routinely receive inspections from State and Federal regulatory authorities on a regular basis.

ENVIRONMENTAL RESTORATION PROGRAM

The DLA environmental restoration requirements, funded from the Defense Environmental Restoration Account (DERA), total $41.4 million for fiscal year 1992, including $36.1 million in the Installation Restoration Program (IRP) area and $5.3 million for other hazardous waste operations. These total requirements represent a sharp increase from previous funding levels as a result of growth in the Installation Restoration Program. For example, our IR funding has increased by $28.3 million between fiscal year 1990 and fiscal year 1992. This increase reflects, first, the expected movement of several of our projects from the investigation phase to the cleanup phase; second, the transfer of the Sharpe and New Cumberland depots to DLA; and third, increased potential involvement in potentially responsible party sites owned or operated by private parties. We refer to these as third party sites.

We are currently conducting 15 Remedial Investigation/Feasibility Studies (RI/FS) at DLA-managed locations. Four of the DLA-managed installations are on the EPA's National Priorities List (NPL). They are Defense Depot Ogden, UT; Defense General Supply Center at Richmond, VA; the Defense Depot Region West, Tracy Site at Tracy, CA; and the newly-acquired Defense Depot Region West Sharpe site at Stockton, CA.

Three of our four NPL sites have signed Interagency Agreements (IAGs) with Federal and State regulatory agencies. The fourth site at Tracy, CA, was placed on the NPL in July 1990. We are currently negotiating an IAG for that installation.

As reported in the annual report to Congress on environmental restoration, the RI/FS investigations currently underway are examining a total of 140 individual sites. An additional 102 sites have been determined as requiring no further action. These are sites which have been excluded from further investigation at locations such as our NPL sites where we are conducting RI/FS work in coordination with regulatory agencies.

We are pleased to report approval of our first Record of Decision (ROD) for remediation at a DLA NPL location. Last September we signed a ROD for restoration of one of the four operable units at DDOU. We expect to sign RODs for the other operable units at DDOU by 1992. Also, we are currently working with EPA Region 3 and Virginia authorities on two additional RODs for our NPL location at DGSC. We hope to complete these RODs this year.

With regard to third party sites, in May 1990 we entered into a consent order with EPA Region 9 to conduct a removal action at a site at Fairbanks, AK. We utilized the Omaha district Corps of Engineers rapid response contract and we were able to initiate removal actions at the Fairbanks site by July. Working double shifts, we were able to complete the majority of the work requested by EPA by October 1990. This included removal of 1,048 cubic yards of contaminated soil, 271 drums of hazardous materials, 4 railroad tanker cars of flammable liquids, and containerization of 85 drums of dioxin/furan contaminated ash.

DLA also negotiated a consent order with EPA Region 9 for a removal action at a similar third party site in Las Vegas, NV, during 1990. During the period from June to August 1990, approximately 1,036 drums and 216,000 lbs. of hazardous materials were removed from the site for disposal. By contracting with the EPA emergency response contractor, DLA was able to complete removal actions on a timely basis.

As you know, environmental compliance involves many people from many State, local, and Federal agencies working through various regulatory and legislative requirements. This is often a difficult task, but one that DLA is committed to see through to completion.

Senator **Dixon**. I thank you, Mr. Reitman. The Chair recognizes the Senator from Michigan.

Senator **Levin**. Thank you, Mr. Chairman, for letting me go first. I appreciate your usual courtesy. Mr. Chairman, first, Mr. Baca, I wonder if you could comment on the failure of the Defense Department to include in this year's budget the report required by last year's defense authorization bill. We cannot find it in that budget submission, and section 341 requires that it be part of that budget submission. Did we miss it or did you miss it?

Mr. **Baca**. Mr. Chairman, it is part of the package.

Senator **Levin**. Where is it? We could not——

Mr. **Baca**. I am told that it is not complete.

Senator **Levin**. Pardon?

Mr. **Baca**. Mr. Chairman, it is on its way.

Senator **Levin**. When will it be delivered?

Mr. **Baca**. I suspect within the week.

Senator **Levin**. Okay.

Senator **Dixon**. I will see to it that the staff contacts them, Senator. We will see that you get it.

Senator **Levin**. On the question of clean up, do you happen to know the numbers off hand as to what the total number will be shown in that report, cost of compliance?

Mr. **Baca**. Mr. Chairman, I cannot comment on that.

Senator **Levin**. There is nobody here who could just give me that total figure?

Senator **Dixon**. If somebody can, we would be glad to have it for the record.

Mr. **Baca**. Mr. Chairman, rather than give you guesses, let me get that report to you.

Senator **Levin**. Okay. Fine. On the question of clean up, are any of the costs of the clean up of bases that will be closed under round 2, whatever that list is or ends up to be, will any of those costs come out of DERA?

Mr. **Baca**. Mr. Chairman, the best way to answer that is that for the 1988 base closures a special account has been created. And the way that account was established is to take money that was programmed for DERA, to extract those monies and put those monies into a special account. For the 1992 budget, the approach would be to use the DERA account. However, we are evaluating the most effective ways of funding base closures. I believe that a special account probably should be established in order to enhance the clean up and the transfer of the property as soon as possible.

Senator **Levin**. Let us go through that again. Round 1 of the base closing had a dedicated fund for clean up?

Mr. **Baca**. That is correct.

Senator **Levin**. And you are saying that some of those funds came from DERA?

Mr. **Baca**. That is correct.

Senator **Levin**. And did Congress approve that specific transfer, or was that done administratively by the DOD?

Mr. **Baca**. I guess I am assuming that Congress approved it.

Senator **Levin**. Well, then you are saying we approved two different numbers, one for DERA and one for the clean up at the round 1 base closings?

Mr. BACA. That is correct.

Senator LEVIN. All right. Now, in the second round that is being proposed, we have not yet set out a separate line item, nor have you submitted a request for a separate line item. Is that correct?

Mr. BACA. That is correct. And the primary reason is we do not know which bases will be closed.

Senator LEVIN. All right. Do you have any objection to there being a separate line item, a dedicated fund for clean up at the bases that will be closed under round 2?

Mr. BACA. No.

Senator LEVIN. All right. That is what the House of Representatives has done in their bill. They have added a provision for a separate line item for clean up of bases in round 2, and you do not object to that amendment?

Mr. BACA. I do not object, no.

Senator LEVIN. All right. Will the clean up at bases to be closed be faster or slower than they otherwise would have been?

Mr. BACA. Mr. Chairman, I expect that they are going to be faster. We have created a task force whose specific purpose is to review everything that is involved in base closure, and we are looking at creative and innovative ways of expediting the clean-up. We are also looking at areas that hinder our clean-up so that we can perhaps suggest legislative changes if that is necessary, or make administrative changes with the regulatory agencies. But our goal is to expedite the clean up of bases to be closed.

Senator DIXON. Could you accommodate me, Senator? I am interested in your line of questioning. The final base closure confirmation will be made on July 1, that is any revisions, modifications, additions to, or other changes in Secretary Cheney's list, as I understand it, Senator, will be made on July 1. I wonder if you would pursue the question of how quickly thereafter they would be in a position to suggest to us the necessary funding in view of our markup requirements and so forth.

Mr. BACA. I believe we could probably do that today. We are working on——

Senator LEVIN. I hope you cannot do it today.

Mr. VEST. Mr. Chairman, may I interject, please?

Senator DIXON. Yes.

Mr. VEST. We are assuming in the Air Force that the base closure process will run to final decision or be completed in late September or October if you run through all of the provisions of law. So it is quite unlikely that the process will be finished at the time the Commission submits, because you cannot assume that it is all done, final decision, until the process is completely done.

On the other hand we all know what our out year requirements are for the clean up of each of those installations, and that information is readily available.

Senator DIXON. Well, I did not want to interrupt my colleague, but here is my confusion. We know what is on the list now, Mr. Vest and Mr. Baca. Every member of that Commission has publicly stated, I believe, Senator, that they are going to make some modifications and changes. I do not expect any radical changes, to be candid with you, but I expect some changes. So that I presume that neither your good offices, although I respect your offices, or this

Senator in his markup, or anybody else, can presume the final result until July 1. Do you follow that?

My simple question is when you get the final result on July 1 with the changes in Secretary Cheney's report, how long thereafter will it take you to give us a ballpark figure at least of what the cost will be for dealing with the environmental concerns with respect to the closings in this round, so that we in our authorization markup in this subcommittee and in the whole committee, and for that matter, Senator, more importantly, the appropriations aspect of this thing, can contemplate that sum. Is that——

Mr. VEST. I could give you that information before I leave this room for the Air Force on any base you want.

Mr. BACA. And, Mr. Chairman, that is true with the other installations. We do have projected out-year costs for all our installations. And when the final list is approved by Congress and the President——

Senator DIXON. You just do your addition. Okay. I get it. So in other words you are saying, thank you for letting me interrupt, Senator, you are saying that by the time we return from the July 4 break you could give us a number which encompasses whatever the final July 1 report is? I thank the Senator for letting me clarify that.

Mr. BACA. Yes.

Senator DIXON. Thanks. Pardon me for interrupting.

Senator LEVIN. No, thank you. Let us go back to Mr. Baca's statement about where the funds are going to be coming from for any separate dedicated account for clean up at whatever bases end up on that base closing list. If you clean up those bases faster because they are being closed, does that not necessarily mean that the bases that are going to stay open will be cleaned up slower since you have a finite amount of money in DERA?

Mr. BACA. They will not be cleaned up slower, that is correct.

Senator LEVIN. No, my question is the opposite. If you have an account called DERA which is for clean up of bases, and that is the money which is going to be used for the bases that are going to be closed, and if they will be closed faster than otherwise because they are being closed, that means you have got less money left in that account, it seems to me, for clean up at the bases which are open. So does not your testimony then mean that by speeding up the clean up at the bases that we are closing, we are going to be slowing down the clean up at the bases that are going to be staying open?

Mr. BACA. I would have to agree with your logic. You know, if there is a static amount of money, if you are dedicating more to a given number of bases to expedite their clean up, that obviously affects the others.

Senator LEVIN. Well then, is there not a finite amount of money? Are you going to be coming in with a supplemental budget request for clean up of closed bases?

Mr. BACA. No, sir.

Senator LEVIN. Well, but then the effect of closing bases is slowing up clean up on all the other bases we have got.

Mr. BACA. That has not been true with the 1988 list because of the dedicated account. It is also possible that when bases under the

1988 list are sold off, that money would become available to again apply toward clean-up.

Senator LEVIN. Well, has the Congress decided that any funds from bases which are sold is going into environmental clean up?

Mr. BACA. It apparently is permissible under the legislation.

Senator LEVIN. So we have legislation in place which already allocates any funds from sale of properties? Is that what you are saying?

Mr. WALKER. Senator, if I can interject here, the special account that was set up was an account that would receive money from sales and that could be used, as well as that that came from the Defense Environmental Restoration Account, some from the operation and maintenance account. That fund was established to expedite the clean up of the closed bases so we could get them to beneficial use as quickly as we could.

Senator LEVIN. What is the name of the account which will contain any receipts from the sale of closed facilities? What is the name of that account?

Mr. VEST. Base Realignment and Closure Account. The acronym is called BRAC.

Senator LEVIN. That just goes into the general account?

Senator DIXON. Staff does say that that is correct.

Senator LEVIN. That just goes into that general account then for base closing?

Mr. WALKER. It was not limited to just the DERA account. In fact, we added monies to expedite the process. We had a certain amount of Defense Environmental Restoration Account money programmed, and there were additional requirements if you are going to give up control of these installations. Thus, monies were added to that account. We would expect that in the special account for this new round of base closings. That added addition is necessary since you have to do more if you are going to release the bases to public use or other non-Federal use requiring greater clean up.

That is an added requirement, and also you want to accelerate cleanup. We have a certain amount of DERA funds programmed, and we would consider those as part of the monies going into the account.

Senator LEVIN. My time is up, and I will come back on a second round on a different subject.

Senator DIXON. Please, pursue your course because there is just apparently you and I, colleague.

Senator LEVIN. Thank you, Mr. Chairman. How much money has been added to that Base Realignment Account so far, approximately, from the sale of closed facilities in round 1?

Mr. VEST. Mr. Chairman, I can speak for the Air Force. It is zero. We have sold no property out of round 1.

Senator LEVIN. How about overall? Do you know?

Mr. BACA. No sales have occurred. The Air Force would probably have the first one.

Mr. VEST. It is the Air Force's belief also that one should not anticipate substantial amounts of money, and we believe the amount estimated from sales was substantially over estimated by the 1988 Commission.

Senator LEVIN. Yes, I would think so, too.

Senator DIXON. Would you say that again, please?

Mr. VEST. The 1988 Commission estimated substantial amounts of money from the sale of property. The Air Force believes that that was much over estimated, and that when the process is done that we will find that there really was not that much money generated from the sale of property.

Senator DIXON. That would appear to be the case in my State with two closings.

Senator LEVIN. I think that is going to be true nationwide.

Mr. WALKER. Mr. Chairman, in fiscal year 1991 for the Base Closure Account, Army only, we had $50 million, about $25 million coming from DERA and $25 million coming from the operation and maintenance account placed in the Base Closure Account. We did have sales of approximately $2 million from one sale that was made in Alabama at the Alabama Army Ammunition Plant. It is a small amount, but we have made one sale to add revenues to the fund.

Senator DIXON. If I could interrupt at this point, I have talked to my colleague about this. They have closed two bases in my State. One was supposed to be the most expensive land in the country in the Fort Sheridan area in the suburbs of Cook County where the very affluent people in my State live, but apparently there will be no land sales when it is over with. So I do not know how you get any money if you do not sell anything.

Miss SCHAFER. I think, if I might, Mr. Chairman, just point out that the way the law for property disposal works, public benefit transfers have a priority over sales, and very often another Federal agency would want to make use of that property, and the State agencies and locals as well.

Senator DIXON. And that is what we are finding the case to be, Ms. Schafer, quite frankly, at least in my State. And I cannot speak for the country, but I suspect that these assumptions, may I say to my colleague, about these vast sums that will be realized from sales are mostly pipe dreams.

Senator LEVIN. Not only are they pipe dreams, but the effect of that is in part that we are not going to have as much available for the Base Realignment fund as we expected we would have, and therefore we are not going to have as much available for clean up of bases, both open and closed, that we expected. And if we take money from DERA and from the Base Realignment fund for clean up at closed bases, we are going to have less money available for open bases. That is part of the upshot of all of this. And that is a real concern.

Mr. VEST. Senator, if I may, we have grave concerns over the whole closure process and then being able to execute it; mainly in the ability to make a rapid transition to civil use. In terms of the clean up, we believe in the Air Force and we have testified before the closure Commission to this effect, we simply have to change a law or some provisions of law, and we have to have a different process. Because it is my personal view we are going to have a very difficult, if not impossible time making an effective transition of these bases that are being proposed for closure in the current Commission.

Senator DIXON. I want to observe, if I may interrupt my colleague again, that what he is developing here is immensely important. I happen to be the author of the base closing Commission we are operating under right now, which is under very strict orders to return to us a report by July 1, which incidentally is not adequate time, may I say. We have to make some reformations to this law, in this markup, may I say to my colleague. I am anxious to have you folks come back to our shop with the thoughts you have. I hear your suggestions. We are going to have two more rounds of this, under the existing legislation, and we had better adequately reform the law to reflect your needs and certainly the environmental concerns.

I suspect we do not have the funds out there to clean up all these bases. I am not trying to pursue another course on the questioning you are asking, but I cannot imagine us having the necessary funds right now for the first 89—was it 89 in the first round? What was the number?

Mr. BACA. Eighty-six.

Senator DIXON. I missed it by three. 86 in the first round. How many have we got in this round? 40?

Mr. BACA. Forty-three.

Senator DIXON. 86 in the first round, and 43 in this round. May I say to my colleague, I do not think we have the money to adequately do the job on the first 86. I am not sure.

Mr. VEST. We believe that if we have some adjustment in law, not necessarily the base closure law, but adjustment in law and adjustment in process, we might be able to do this faster and at least at less cost.

Senator LEVIN. But faster on the closed bases or faster on all bases?

Mr. BACA. All bases.

Mr. VEST. Well, certainly on the closing bases, and I believe we can do it on all bases. But we are dealing with a process that is very cumbersome, it is very laborious, it is very expensive, it is—

Senator LEVIN. And very necessary.

Mr. VEST. And very necessary. But we think we can do it much better.

Senator LEVIN. I will wind this part of my question up by just requesting——

Senator DIXON. No, please continue. I learn more from your questions than from mine.

Senator LEVIN. The nicest guy in the whole world, this Chairman. I would request of you, Mr. Baca, that you let us know on behalf of all the services by the—and I think maybe I had better, I cannot do this in the name of the subcommittee, the Chairman would have to agree with this. I can ask for this, but only the subcommittee can really direct this, so I would need the Chairman to concur if in fact he agrees with this, that it would be very helpful to us if you could present to us by the 6th of July—when does markup start? The 6th?

Senator DIXON. We are not coming back until the 8th.

Senator LEVIN. Say the 7th of July, the cost of the clean up of all the bases that are on the July 1 list, which is what the Chairman has asked for before. Th~~at is the~~ piece that you asked for before, for them to tabulate. You have the figures available, all you have to do is punch the keys and you will get the total. But the second piece which would be helpful is where you are going to get that cost from for any dedicated account that we create. How much of it will you need this fiscal year, next fiscal year, the fiscal year thereafter, and how much are you going to get from DERA and how much are you going to get from the Base Realignment Account. That would be very helpful, I think, to this subcommittee in our markup and in any earmarking and dedication that we do for clean up.

Mr. BACA. Mr. Chairman, we can provide those figures too. May I ask that it be the 11th or 12th rather than—I think the 7th is a Sunday.

Senator DIXON. The 7th is my birthday. I can assure you it is a Sunday.

Senator LEVIN. What a birthday present that will be. Do it on the 7th in that case.

Mr. BACA. When is markup? Are you the 8th or the 9th?

Mr. BAYER. We are the 9th.

Senator LEVIN. The 12th is too late. I am afraid we would need it by the morning of the 8th.

Senator DIXON. The 9th? Is that our markup?

Senator LEVIN. Well, which is this subcommittee, though?

Ms. CREEDON. We need it the 8th.

Senator LEVIN. The 8th. This subcommittee is the 8th?

Ms. CREEDON. The 9th.

Senator LEVIN. Oh, the 9th. I am sorry.

Senator DIXON. If it is possible to have it on the 8th it would be a great accommodation.

Mr. BACA. We will shoot for that. We may have to work the weekend, but we will have it for you.

Senator LEVIN. The rest of my questions would be for the record. They relate to the cost of clean up at Wurtsmith Air Force Base in Michigan where we have a major problem with water pollution and other problems. And this is one of the bases that is on the base closing list, at least temporarily. We hope it is not on the final list. But either way, we have a lot of questions on it. We are not at all satisfied with the speed of the clean up. And I will ask those for the record, because I do not think I will be able to get back and the Chairman has been extremely gracious, as always. So I will submit those for the record for you.

Senator DIXON. I thank my colleague. I am going to pursue those questions, because while there is the whole broad concern about environmental clean up, and I want you to express to the Secretary of Defense the profound gratitude of this Senator and I am sure others involved, about the position he has taken of being very forthright about meeting this problem head on. It is an expensive problem, and it obviously takes away funds that many feel are needed for other national security concerns. It is obviously a major obligation of all of us to clean up whatever mess we cause out there in connection with the performance of the duties of our military people.

Let me get back to this point; while I would like to see us have enough money for everything, clearly it is obligatory, I think, that we have the money to clean up these bases before we close them. We cannot be throwing this land out for other public usage without cleaning it up before we do that. I am sure we all agree with that.

Mr. VEST. Senator, if I may, I think I would take exception to that. It probably requires a bit of dialogue.

Senator DIXON. All right.

Mr. VEST. The notion that we must clean up in terms of current standards and current regulations before we can dispose, in my view, will not work, because we will not be able to transition these bases that this Commission process is going to close in a timely manner. And it will be devastating to those communities. We are going to have to transfer, we are going to have to parcelize these bases and—it is our belief we should be allowed to transfer this property while the clean up process is ongoing. If we do not do that, if we mandate clean up before disposal, we are going to have vacant cities. They are just going to sit there, and the communities cannot live with that.

Senator DIXON. I think that is an interesting new concept that has not been evaluated before as an example.

Mr. VEST. We are trying desperately to transfer land at Pease and Norton. I may not be able to transfer land at Pease for productive reuse—that base is closed, and we are potentially dead in the water on transferring property at Pease for a ready, willing, and able buyer.

Senator DIXON. What does this buyer want to do with the land? Let us talk about Pease.

Mr. VEST. This buyer wants to acquire a hangar and begin aircraft maintenance work at Pease. And I do not know if we will be able to do that until each and every little bit of that base is cleaned up.

Senator DIXON. Are you suggesting—now let me see if I can make this a more finite dialogue between you, Mr. Vest, and the Chair. You are not suggesting, I hope, that we would transfer some land in less than a corrected state. I think you are not doing that. I think you are saying you could take part of a base, having cleaned that part up or being able to feel it was environmentally secure, and transfer that part while you do the job on other parts. Or are you saying what I hope you are not saying? Because, you see, quite candidly, we have some bases where they did a lot of target practice and other things. I think there is live ammo and everything else around on the base, and we are going to blow up people, I am afraid, if we follow your course.

Mr. VEST. Senator, I am saying both. We have maintained in the Air Force for quite some time——

Senator DIXON. I think that is a new concept that kind of shocks me.

Mr. VEST. If I may, I will explain. We have believed that we should be able to parcelize property in excess to clean property. For an installation that is on the National Priorities List, there are those who believe that we cannot do this because of CERCLA section 120(h), and that is an interpretation in the regulatory community. We have also transferred property in the last 2 years, in this case an Air Force industrial plant, where the property was not cleaned up, and we have actually sold it to General Electric.

Senator DIXON. May I interrupt you, Mr. Vest? I read from page 42, section 9640 of the Federal Environmental Laws on the types of deeds we give on transfers of land in these base closures, and I quote, "a covenant warranting that all remedial action necessary to protect human health and the environment with respect to any such substance remaining on the property has been taken before the date of transfer, and any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States."

Mr. VEST. That is correct.

Senator DIXON. Are you suggesting we change the first part?

Mr. VEST. Yes, sir.

Senator DIXON. Well, my God. I do not think the Congress is going to accommodate you.

Mr. VEST. The reason being is that the—sir, the——

Senator DIXON. I am not going to accommodate you, Mr. Vest. Are you going to accommodate the gentleman?

Senator LEVIN. I think he has already said he is not complying with the first part. That even shocks me more, not what you are saying is they want to change it. That is a shocker. But what he just told us is, it seems to me, that they have transferred land which already violates this.

Mr. VEST. We transferred land at Plant 36 because General Electric was the principal responsible party. And under the law that kind of transfer is proper and legal. We have retained in the transfer documents, in the deed, the full liability and responsibility for the clean up. General Electric grants us full access to conduct that. The transfer has occurred, it is proper, it is legal, and it is working.

Senator LEVIN. But you do not need a change in the law, then.

Mr. VEST. That is only where they were the principal responsible party. We could not do that at any of the closure bases because the purchasing party is not a principal responsible party.

Senator DIXON. I see what Mr. Vest is saying. I apologize to you, Mr. Vest. The staff has now called my attention to the fact that when you make a transfer to a potentially responsible party, I take it you can then do that.

Mr. VEST. That is correct.

Senator DIXON. A deep pocket party. I take it you are suggesting that General Electric is that type of party. In other words, where you make a transfer to somebody that has the economic ability to deal with this, you can transfer that responsibility to them, I take it.

Mr. VEST. Actually, we can transfer the property, but we still have the liability and we will execute that liability. And so the reason I am putting this forward, Senator, is that that is not permissible under the law for base closure. It was permissible in that case. We did it, we know that it works. And we have in fact forwarded to the Base Closure Commission our views that we should be allowed in these base closure instances to transfer property while that process is ongoing. We still have the liability, we will still execute that liability, but we must take actions to remove these impediments to the transfer of this property into productive economic use.

Senator DIXON. I do not want to argue with you, Mr. Vest. But what you are suggesting, taken to its ultimate extreme, would mean that the government could very slowly do this over a very long period of time, exposing the public to very serious hazards. If we say you have to do it before you transfer it, you have got to do it. If we let you do it at your leisure, over a very long period of time, it occurs to me that there are very, very, very serious environmental concerns in society as a whole, and this Senator would share those concerns. Maybe there is some kind of an accommodation that would meet all of the concerns that everybody has here.

I can see how it is hard to get rid of these bases and close them and meet all the environmental standards, but I sure do not want to slip it very much. I would be very concerned about that. I go to some of these bases, you know, you are talking to a Senator that looks at some of these bases. I am telling you, I would not want the public generally using them. I think that we may have a problem here.

Mr. VEST. Given the existing regulatory process, we will not be able to meet the kinds of clean up schedules that will be necessary to be responsive to the communities.

Mr. BACA. Mr. Chairman, as I indicated, we do have a task force evaluating these issues. You know, there is a very logical way of proceeding to transfer, you know, clean dirt, solutions to allow us to clean up underground contamination. But, you know, rather than debate it here, we promise that we will advance solutions to you that I think you will find very acceptable.

Senator DIXON. I thank you for that, Mr. Baca. I want to tell you, General Electric does not scare me very much. I suppose that that is a real legitimate deep pocket out there that we can depend upon. But we live in a generation where a lot of names occur to me that I will not even indicate in this room, that were supposed to be multibillionaires are selling off airlines and buildings and everything else because they have not got any money at all. So I think this idea of transferring the liability from us to somebody else does not appeal to me very much.

Mr. VEST. I must have been misunderstood. We are transferring no liability to anyone. We retain the liability, and we must pay, sir.

Senator LEVIN. Nor do you propose to change the law in a way which would evade that responsibility?

Mr. VEST. Oh, absolutely not.

Senator LEVIN. The change that you are proposing, as I understand it, is that we do in the base closing law what we already do with the transfer of other facilities?

Mr. VEST. That is correct.

Senator DIXON. But it does say here, Senator——

Senator LEVIN. Is that correct? You say that with other facilities, that GE facility, that we were allowed by law to transfer that facility where we retained the liability, but you do not have that flexibility when it comes to the base closing law. Is that what you are saying?

Mr. VEST. That is correct, Senator.

Senator LEVIN. And you would like the same flexibility on the base closing law that you already have with the General Electric facility under whatever law that was transferred.

Mr. Vest. Yes, sir. And I believe that if looked at very closely by representatives of the communities involved they would agree with that.

Senator Levin. I understand that argument, but I just want to make sure first what it is. And if I could interrupt on this point—

Senator Dixon. Sure.

Senator Levin. We are going to be faced with communities, Mr. Chairman, that are going to very desperately want that authority to reside in the Department of Defense, because they are going to want to have property transferred to them while the process of cleaning up is ongoing. I am not talking about live ammo. I mean, I think the Chairman points out some very clear problems here. I do not know how we separate some environmental problems from others, but the point is that you are making, Mr. Vest, and I think the Chairman, who is incredibly responsive, by the way, to communities, of all the people I know around here I would say this Chairman is as responsive to the communities in his State as anyone could be.

But I want to say we are all going to be faced with communities coming to us saying please, we want the Department of Defense to transfer this land to us. We need it now. The clean up will be ongoing, it will be done safely, it will be done in a way which protects the public, but we need the title transferred to us before the 2 year clean up is finished. So we will be getting those pleas from communities. And what Mr. Vest is warning us about is we may want to be in a position to respond to those pleas, providing it can be done consistent with the public safety, which the Chairman very properly points out.

Senator Dixon. If I may follow along with this, I believe I now understand the distinction that Mr. Vest is making. Let me make sure I have it clear for the record. Mr. Vest, you are telling me that the law that I was reading from here, which goes on to say the requirements of subparagraph (b) shall not apply in any case in which the person or entity to whom the property is transferred is a potential responsible party with respect to such real property. You are saying that paragraph is not in the base closing law, and that is the problem? Is that what you are telling me?

Mr. Vest. The——

Senator Dixon. That is not what you are telling me?

Mr. Vest. We were able to transfer, in the case of Air Force Plant 36, under the provision you just read. We would not want to take that exact provision and put it in base closure. What we need are words applying to base closure that would afford the opportunity to do that.

Senator Levin. Have a similar effect?

Mr. Vest. A similar effect, absolutely.

Senator Dixon. In other words, you are saying that in the present base closure, we have a drop dead provision. Is that what you are saying? That in a base closure now we say you must clean up, bang, before you transfer. You are saying we need some kind of a reasonable accommodation to deal with the problems that you and my friend the Senator from Michigan are discussing, where let us say a municipality wants that property, they say we would like to have it right now, where you could negotiate an accommodation where you would say in a period of X years we will have this job done, it is our liability to do it, but we will give you a deed now. Is that essentially what our discussion amounts to?

Mr. VEST. Yes, sir.

Senator DIXON. I see a lot of heads shaking yes.

Mr. VEST. And I would use the prototype that we are using at Chanute, sir. And in that case what we did was that we negotiated an agreement between the State of Illinois, the community, and the Air Force, and that three-party agreement governs the conduct of the clean up at Chanute Air Force Base. And it is our belief we should do that for every one of these bases. We should have parties to the agreement that have a stake and an interest, not only in transferring the property, but the protection of the public health and the environment.

Senator DIXON. You are talking about something I am very familiar with, and very interested in. I would like to pursue it a little. Chanute and Rantoul, you know, they are married to one another. I understand it, I have been there many times. The area is very familiar to me. What is the negotiated agreement there, that is to say with the clean up at Chanute? What is your understanding? Do you have an agreement now with Rantoul and the State of Illinois concerning how you will proceed in that matter?

Mr. VEST. Yes, sir, we have a two-tier agreement. One that I signed at the general level, one page, and then a more detailed agreement that lays out the procedures and how we will do it together. And we need that kind of an agreement to expedite the process, but also to have the necessary safeguards for the State and the community to assure that in fact the Federal Government makes good on its obligations.

Senator DIXON. You retain the liability, do you, to do that?

Mr. VEST. Absolutely. I will provide you copies of the agreement, sir.

Senator DIXON. I would very much appreciate it. Would staff see to it that Mr. Vest is accommodated by going to him and getting those things so that we will have them for the record? I would appreciate that very much. I would like to suggest that I really do believe there ought to be some finite termination of the period of time in which you deal with that, however. I would be concerned about that. Our responsibility, until recently in my view, has not been particularly honored. I say that excluding the folks at this table and our present Secretary of Defense. I hope everybody understands that. But I think it is something that we need to be concerned about.

Do we have adequate money to deal with the 86 bases already ordered closed, Mr. Baca?

Mr. BACA. No, Mr. Chairman. If you look at just the $100 million that is set aside for clean-up, that does not take care of the outyear needs.

Senator DIXON. Do we have the necessary—do we have a general plan that contemplates the total cost for closing the 86 bases already mandated to be closed? Let us forget about the ones on this list, I am not talking about the current list of 43. Let us talk about the 86 under the first round—the Secretary Carlucci Base Closure Commission set up by the Secretary of Defense—with the drop dead provisions where the Congress had the option to close or not close all of them, and of course voted to close all 86. Now, that is a matter of record. Those are ordered closed, correct, Mr. Baca?

Mr. **Baca**. Yes.

Senator **Dixon**. There is no reversal of any of that. That is in the works. Now, how are we handling that, which is to say I heard Mr. Vest say what you are doing at Chanute, but what are you generally doing to get this all in place? Have you figured out how much the whole thing costs, how much it costs each year, the total cost?

Mr. **Baca**. Yes, Mr. Chairman, we have those projections.

Senator **Dixon**. What is the total cost of closing all 86 of those bases?

Mr. **Baca**. Perhaps the best way is to have each of the services talk about their bases affected by base closure.

Senator **Dixon**. Would you mind very much if we did not do that? I could see that being very lengthy. Could I have a ballpark figure?

Mr. **Baca**. Can we provide that for the record, Mr. Chairman? Perhaps that is the way to proceed.

Senator **Dixon**. I would certainly like to have something approaching a ballpark figure here of what those 86 bases are going to cost to close. Take your time, all of you talk back and forth. It is okay. I would rather—it does not have to be finite, but I would like a good idea. The environmental clean up aspects, not the total cost. Environmental.

Mr. **Vest**. Air Force, $440 million.

Senator **Dixon**. Air Force, $440 million.

Mr. **Vest**. That is for five bases.

Senator **Dixon**. Five bases, counting Chanute.

Mr. **Walker**. Mr. Chairman, the Army has estimates of the clean-up costs of those that we will or that have the potential for being sold, $308 million.

Senator **Dixon**. I take it that is those that have the potential for being sold. In other words, there are others you still have that you are stuck with?

Mr. **Walker**. Well, take for example Jefferson Proving Ground in Indiana. The estimates to clean up the ordnance so it is fully protective of the public health and safety is somewhere between $2.5 billion to $5 billion. To render the area safe to have people out on the former testing range, requires removing unexploded ordnance down to a depth of 10 feet.

Senator **Dixon**. Let me stay on that point for a minute. Essentially there we have a base we probably cannot get rid of. What do we do with that?

Mr. **Walker**. We are looking at opportunities for the State to use that as a wildlife area. We will do a surface sweep estimated to cost about $70 million.

Senator **Dixon**. Do not go in there hunting though.

Mr. **Walker**. No hunting.

Senator **Dixon**. That is the way to get a deer, I will tell you that.

Mr. **Walker**. With a surface sweep, there are Fish and Wildlife opportunities. In addition, there would be observation as the roads are safe to drive. We do have hunting in certain areas already. There are certain safe areas now.

Senator DIXON. I think what you are telling me is some of these bases you just could not afford to clean them up.

Mr. WALKER. That is right. I have only given you the figure that we expect are the ones that we can afford to clean up.

Senator DIXON. Well, let me pursue that for just a minute. Three hundred and eight million dollars for the ones you can afford to clean up. From the standpoint of the Army, how many have you got there that you cannot even clean up, like Jefferson?

Mr. WALKER. Jefferson Proving Ground is the single example there. I do not think there are any others that pose that question. We have ranges that we have transferred for Army Reserve uses. We do plan at Jefferson Proving Ground to sell 3,000 acres.

Senator LEVIN. Would you yield?

Senator DIXON. Oh, please.

Senator LEVIN. Did Jefferson pass a cost-benefit analysis?

Mr. WALKER. It was viewed from the standpoint of military value——

Senator LEVIN. But in terms of closing it. Are we not supposed to weigh the costs of closing, including environmental clean up, against the cost of keeping it going?

Mr. WALKER. I think in the early stages they thought that it could be transferred to like use. There would be opportunities for a Hercules powder company or another firm to come in and use that for their testing. Now we are finding that the interest is not there.

Senator LEVIN. I see. In other words, in 1988, I am informed by staff that the cost of environmental clean up was not included——

Mr. WALKER. That is correct.

Senator LEVIN [continuing]. Because there was an ongoing liability to clean it up. But in the new law that is no longer true, is that correct?

Mr. WALKER. It is still military value. It is one of the considerations, but military value still overrides.

Senator LEVIN. The law does not deal with the issue of whether we count the cost of environmental clean up in the cost-benefit analysis on base closing?

Mr. WALKER. For the 1988 decision, it was not a factor.

Senator LEVIN. But does that apply to round 2?

Mr. WALKER. It is being considered——

Senator LEVIN. No, no, no. When the Defense Department went through and said now we will get, it will cost us X number of dollars to close this base and we will get back Y dollars over Z years, and we had that cost-benefit analysis, did they include, when the DOD presented to the new Base Closing Commission their list, did they include the cost of environmental clean up in that analysis?

Mr. BACA. Mr. Chairman, let me call on our attorney, Larry Hourcle, to answer your question. Perhaps he can offer some clarification.

Senator LEVIN. If we need an attorney we are in trouble.

Senator DIXON. Please identify yourself, sir, for the record.

Senator LEVIN. I am an attorney. I am allowed to say that.

Colonel HOURCLE. I am Colonel Larry Hourcle. In addition to being counsel for environmental matters, I was counsel on base closure matters. DOD did issue an instruction to the services with regard to the current base closure process that costs of clean-up would be considered in the return on investment calculation. The thinking behind that is DOD has already incurred an obligation to remediate any contaminated property. However, it would be wrong to assume that where property has been contaminated that one could expect to receive instantly proceeds from highest and best use of that property. So the DOD instruction was to downward adjust any expected proceeds to be returned from that property, and that would then appear in the return-on-investment calculation, the period in which one would expect to have that magic break-even point from the closure.

Senator LEVIN. Could I pursue that, Mr. Chairman, just for one minute? Would you, on the Wurtsmith Air Force Base, supply to me what the projected total cost of clean up is that was used in that formula? I do not mean now, I mean—you have got it already? Just give me the dollar amount for total clean up cost that you used when figuring out that cost-benefit ratio.

Mr. VEST. Estimated clean up cost at Wurtsmith is $48 million.

Senator LEVIN. That is total, not just the first couple of years, right?

Mr. VEST. That is the total, sir.

Senator LEVIN. Thanks so much.

Mr. VEST. That is in the future. We have spent quite a bit so far.

Senator LEVIN. On that subject that the Chairman raised, if I could pursue that just for one moment, because I think it was a very useful dialogue there. The testimony here of Mr. Vest is that we would be prohibited under current law from transferring portions of bases while the clean up of other portions is going on. That is what the written testimony is. But as I understand your testimony here, you also would like authority even to transfer the uncleaned up portions as well as the cleaned up portions, providing there is that contract——

Senator DIXON. Yes, contractual understanding about——

Senator LEVIN. Is that correct?

Mr. VEST. That is correct.

Senator LEVIN. I just want to be real clear on this, because the Chairman, who has been the leader in trying to bring some order to the base closing process, I know is going to be having a markup——

Senator DIXON. With big success.

Mr. VEST. If I may, sometimes a very short example is illustrative of a point.

Senator LEVIN. No, I am not pressing you for that. I do not disagree with you, and I do not need the example. I just want to make sure that you are including both the uncleaned up and the cleaned up portions——

Senator DIXON. You know, I might say, Mr. Vest, that I think my friend the Senator from Michigan, who has been very active in this, and others should spend some time with the Chair here talking about this because I really do think that I see your point now. I understand it better after this lengthy dialogue. But I think that there ought to be some kind of limitations on the finite end result of this with respect to these things, or I can see the opportunity for abuse, quite frankly. But I do see the problem, too.

Also, Mr. Walker has opened my eyes to something that is so obvious that I am surprised we have not talked more about it, may I say to the Senator from Michigan, there are some out there that, like this $2.5 billion to $5 billion concern, that are never going to really be probably transferable to any kind of private usage ever.

Mr. **Walker**. That is true. Army has 3,000 acres that are easily cleaned and can be sold. I think there are some 19,000 acres that cannot be sold. I am sorry, I stand corrected, 50,000 acres that cannot be sold because of the high cost of clean up. We are now working to find some beneficial use. It was the smallest of five proving grounds, and in trying to adjust to a smaller testing budget we had to close one. It turned out that JPG was the one we had to close.

Senator **Dixon**. I just want that final figure from the Navy, Ms. Schafer. I have the $440 and the $308.

Miss **Schafer**. For us, my recollection is about $28 million. We had very few bases on the 1988 closure list. I would say under $50 million for rounding purposes.

Senator **Dixon**. Now is that the total amount? In other words, will $1 billion do the job?

Mr. **Baca**. Yes, that is the projected cost based on today's process. Obviously, if we are able to make breakthroughs in technology and then in the process that we are locked into, that cost could be less.

Senator **Dixon**. In other words the record will now show that you are saying to this Senator, subject to whatever revisions you want to do in writing, that $1 billion would cover the cost of the 86 base closings ordered under the Carlucci round, I will call it.

Mr. **Baca**. That is our current projection.

Senator **Dixon**. And how much are you asking for this year, Mr. Baca?

Mr. **Baca**. Under DERA?

Senator **Dixon**. To contemplate the closure of those 86.

Mr. **Baca**. The 1992 request is about $172 million.

Senator **Dixon**. $172 million. Well, just doing some quick arithmetic, what would that take, about 7 years to accomplish the full completion of the clean up on those 86?

Mr. **Baca**. That is probably fair under today's approach.

Senator **Dixon**. I will think about that, there are a lot of things here that have not been contemplated sufficiently by a good many of us, quite frankly. This is a little bigger when you get into it than it looked at the other end where everybody was saying close bases, save a lot of money.

Senator **Levin**. By the way, there would have been a very strong position that we could have taken, and maybe should have thought about, and that is we do not close the base until it is cleaned up. What we have been talking about today is you do not sell the base until it is cleaned up, and there are some complications in that, obviously. There is a balance to be drawn there. The community needs it, but we have got to protect the public safety and we do not want the communities to be given the short end of the stick when it comes to delayed clean ups and extended clean ups.

But there is another position we could have taken, and maybe we ought to contemplate it very seriously, which is we do not close a base. I mean, if you want to give an incentive for a quick clean up to the Pentagon, it would be before a base is closed, before you transfer people and equipment out of there, you put that in condition, that you can turn it over to a community clean. That way the community has either the base there or a clean piece of property immediately.

That is a very strong position to take, and there are a lot of ramifications to it, and I am not proposing it precisely. But I do not know whether, you know, we should even think about that for the next round of base closings.

Mr. VEST. Under existing regulatory processes we would, I am going to overstate this, we probably would not close any bases this century under that approach, because we could not get them cleaned up.

Senator DIXON. I see so many people in the room—counsel is there, and so forth—I hope you are all thinking about all the things we are discussing here, because quite frankly, here is what I want to make a point on. Mr. Courter and others in the Base Closing Commission have said quite frankly, we feel there have to be some revisions here to make this thing work better. Frankly, I would be the first to agree.

As author of the last base closure process, I thought it was a profound improvement over the first round where everything was done in secret. I suffered through that and had a lot of trouble with that but I think we have made some improvements. I would be the first to say that when you do something at the very end of a markup in conference, Senator, between the two Houses of Congress, and you were there and saw us debate this issue, it does not come out quite as well as you would like and there are still a lot of improvements we could make.

I wish you all would be thinking about all of these things and suggesting to people that are with the Base Closure Commission now; Wendy Petsinger, who is particularly in front on all the issues for the Commission; the various things that we ought to be contemplating here. Because there are a lot of loose ends to this doggone thing when you start looking at it. Just the aspect here of, you know, you say close the bases, 86 bases, and you are telling me it costs at least $1 billion. I believe that. I think you might be conservative, Mr. Baca, but I am not arguing, in $172 million this year. By the time you get into place administratively, I do not know how much of that actually cleans up bases. I think it is a concern about how we go about this, and I would like to have your suggestions.

I think the evidence is clear, may I say, having seen how much we have done so far, that this idea of getting a lot of money in, just does not happen. What happens at most of these places is that the various services, as Ms. Schafer pointed out, can see a use for part of the base; we could use it to create a cemetery, and incidentally we do need them, I do not have any quarrel with that. Let us do this and let us do that, by the time you get finished you just do not sell much. We end up keeping most of it.

Maybe that is the way it is, but it looks to this Senator like that is the way it will be. And that being the case, now you stop the bleeding, obviously, as you reduce personnel, there is no need for all these bases—clearly we need to close some. Nobody argues with that. So the logical thing is to do it. But I think these assumptions about oh, boy, here is some land near Los Angeles that is worth all kinds of money, forget about it. In the end nobody is going to buy that to build million dollar homes. It does not happen, or at least it has not happened so far. I am persuaded it will not happen much.

I think we need to think about all those things, I really do. I think that there is—the point I make is that this round is about finished. You know, some will be happy and some will be sad and some will be mad, but July 1 is mostly done. The President could work around the edges. We are drop dead again as a Congress on this. But, I think for the next round of base closures in 1993, we ought to try to get this in a little better shape, and whatever the Commission would recommend to us I would be inclined to do, and they are going to need the help of you folks in DOD.

Mr. VEST. Mr. Chairman, I agree totally. However, we are going to have to make some adjustments for the manner in which we handle the bases that come out of this Commission.

Senator DIXON. Well, I think that is right, we can do that as well.

Mr. VEST. It is very important.

Senator DIXON. You should be giving us some indications about that, I would say

Mr. BACA. We will be advancing some solutions, Mr. Chairman.

Senator LEVIN. Mr. Chairman, can I just add one thing to that summary which I also concur with, including looking at some changes in this markup which the Chairman just indicated he would do along the lines we were talking about, whether that is the final language or not. We obviously have to adjust the law to make it more flexible if we are going to accommodate communities that want land transferred to them. But I also want to focus on this idea that—I want to clean up the bases that we are closing as fast as we can. I mean, all of us want to do that, and as safe as we can. I want to protect the public.

Senator DIXON. Absolutely.

Senator LEVIN. But I am also determined that that will not negatively impact on the bases that stay open. We had some glowing testimony about complying with environmental laws and cleaning up fast and all the rest, but if we take away money from bases that are open in order to speed up the clean up of bases that are closing, we will be not living up to those standards which were set forth by you, Mr. Baca.

So those numbers which you are going to be supplying to us on the 8th are very important numbers because I do not think we should accept a conclusion where we leave the open bases with a slower clean up schedule because we are closing some other bases. That means that we would be leaving people who are living on open bases in an environmentally unsafe and unsound condition, and in many cases the communities that surround them. So I will be looking very closely at those numbers as well and at this budget and future budgets to make sure that we are not doing that. So you have got to be honest about the costs of base closing, not just to the budget but to bases that are remaining open.

Mr. VEST. Senator, if I may, I would be remiss, I believe, if I did not say what I am about to say. And that is that costs for clean up in large measure are driven by the clean up standard. The Department of Defense has absolutely no control over those standards. And there have been estimates kicked around on some of the base closures where we would estimate $48 million, some would say if you applied the safe, safe, safe, maximum safe standard that would apply to that it might cost you $800 million. We do not have any control over that, and I submit to you that has to be looked at.

Senator LEVIN. You ought to be bound by the same standards that everybody else is. All I know is I have an attorney general in Michigan who is suing the Air Force——

Mr. VEST. Yes, sir.

Senator LEVIN [continuing]. For the clean up of contaminated water. We have a lawsuit in Michigan against the Air Force because of contaminated wells. And the question is, you know, I am sitting here on the Armed Services Committee and I have got a community that is facing that situation and an attorney general who is starting a lawsuit. And they are basically saying what am I doing about it. And the answer is I am going to be accountable, personally, and I am going to try to make sure that we are accountable in the Congress and the Department of Defense to not only clean up our act for bases that are closing, but for bases that are staying open. I think it is critical that we do that, and not rob from one to do the other.

Mr. VEST. Senator, we are meeting those standards. But what I think is very important I need to tell you is that that will change costs. And in some cases, in my professional judgment and others, the standards that everyone is being asked to meet across the board are not reasonable. And ultimately when we cost this out—

Senator LEVIN. That is not this committee's jurisdiction.

Mr. VEST. I understand, sir, but I did want to mention that.

Senator DIXON. I thank you for that remark, Mr. Vest. Thanks, Senator Levin. This has been very helpful. May I simply say to all of you that we will begin our markup almost immediately in the various subcommittees, and then in the full committee we will follow up. We hope to pass the authorization bill before we leave for the August break. If you have some suggestions about these things that you think would be helpful, you ought to let us know before the end of the month, and then the conference will be when we return after Labor Day. Also I would hope that some of you would be visiting with the Commission people to enlighten them about some of these concerns as well, because we are going to have to do some changes, I think, in the law before we finish this year's session.

I want to thank you all for coming here today and enlightening us. We appreciate your forthrightness and your cooperation.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR ALAN J. DIXON

DOD CLEANUP GOAL FOR 2000

Senator DIXON. Mr. Baca, I understand that you would like to establish a goal that all the NPL sites will be in the Remedial Action phase by the year 2000. What DERA funding level is necessary to achieve this goal? Are there any impediments, such as a lack of qualified contractors or other institutional problems, that could interfere with this goal?

Mr. **Baca**. Our goal is to commence site restoration remedial actions for all sites by the year 2000. The current budget for DERA through fiscal year 1997 is as follows:

Fiscal years:	
1992	$1,253,000,000
1993	1.450,000,000
1994	1,587,000,000
1995	1,494,000,000
1996	1,570,000,000
1997	1,605,000,000

Figures for fiscal year 1998 and fiscal year 1999 are not programmed at this time. However, they are expected to be at higher levels as many sites move from the study phase to the clean-up phase.

Potential impediments to meeting our goal could be a lack of contractors with qualified personnel who are familiar with the required technology and environmental regulations. Another potential impediment could be if we are collectively unable to improve interagency coordination and unable to find ways to streamline the policies and procedures of relevant Federal and State regulatory agencies to expedite response actions. Congress has charged the Defense Environmental Response Task Force to address these issues for bases identified for closure and I am optimistic about using the results of this Task Force for our entire program.

NATIONAL PRIORITY LIST SITES

Senator **Dixon**. Mr. Baca, I understand you would like to establish a goal that all the National Priority List (NPL) sites will be in the Remedial Action phase by the year 2000. Ms. Schafer, Mr. Vest, and Mr. Walker, have you identified the funds that would be necessary to achieve this goal?

Mr. **Walker**. The funding requirements to meet the goal that all NPL sites will be in the Remedial Action phase by the year 2000 are provided below:

Fiscal years:	*$(x1000K)*
1992	415
1993	403
1994	927
1995	1,273
1996	1,570
1997	1,819
1998	1,817
1999	1,841
2000	1,201

These funding levels were generated from data collected for the Installation Restoration Program Cost Estimate. It was assumed that funding levels for 1992 would not be changed significantly from the current budget guidance. It was also assumed that the number of installations on the NPL will remain constant at the current number.

Mr. **Vest**. The Air Force has established a goal of having our Defense Environmental Restoration Program sites "Finished" by the end of fiscal year 2000. By "Finished" I mean Remedial Actions will be either completed, in-place with long-term monitoring/operations ongoing or a No Further Action Planned document submitted to the appropriate Environmental Protection Agency Region. To meet this goal, we estimate it will take a funding level of $700 million to $900 million a year through the remainder of this century. Our fiscal year 1992 budget submittal is for $482 million which is well short of the desired $700 to $900 million. With this commitment to "Finish" our sites by the end of fiscal year 2000, we have taken numerous steps to accelerate our cleanup and are revising our future funding requirements to reflect our aggressive cleanup efforts. Currently, we estimate it will cost $6.5 billion to complete our Installation Restoration Program.

Miss **Schafer**. The Department of the Navy estimates that it will take about $3.4 billion to complete the Navy's Installation Restoration Program. To meet the goal of initiating remedial action at all sites, not just NPL sites, by the year 2000, we estimate that the Navy will need about $400 million per year. These funds will come from the Defense Environmental Restoration Account.

CLEANUP FUNDING POLICY PRIORITY

Senator **Dixon**. Mr. Baca, DOD has consistently followed a worst-first policy in funding environmental cleanups. How is this policy implemented at NPL and non-NPL sites?

Mr. **Baca**. The DOD program was designed to move forward on all sites largely simultaneously, proceeding first with study, then with action. To date, monies have been adequate to fund the study phase and all executable cleanups. This situation will change as the many sites now under study become ready for cleanup simultaneously. In a constrained funding situation, the Department intends to use the Defense Priority Model to identify those sites that should receive funding first. This model was developed by DOD with input from EPA and the States and was announced by Federal Register notice. It ranks all sites, both NPL and non-NPL, based on risk to human health and the environment. DOD has scored over 500 sites using the model in an RDT&E phase in the fiscal year 1990 and fiscal year 1991 cleanup programs, and is continuing to evaluate its performance and make improvements.

INTERAGENCY AGREEMENTS (IAGS) FOR CLEANUP

Senator **Dixon**. Mr. Baca, how many of the NPL sites lack signed IAGs, and when do you anticipate that each NPL site will have a signed IAG?

Mr. **Baca**. The total number of signed IAGs to date is 67 which includes 73 NPL sites. We are vigorously pursuing our goal to achieve IAGs for the remaining 23 NPL sites, however, a projected date to achieve this is difficult to assess due to the number of other agencies involved, their available resources and the continued growth in new regulations.

NATIONAL PRIORITY LIST SITES

Senator **Dixon**. Each of the services, in conjunction with DOD have been working very hard at negotiating and entering into Inter-Agency Agreements (IAG) at the NPL sites. Ms. Schafer, Mr. Walker, Mr. Vest, some of these agreements are between DOD and the Environmental Protection Agency (EPA) only and not the State where the facility is located; how do you deal with and involve the State in these instances and how do you prevent the possibility of having to clean up a site a second time to meet a different cleanup standard set by the State.

Mr. **Walker**. Where the Army only has a two party IAG with EPA, we try to keep the State involved as much as possible. All documents are submitted to the State at the same time that they are approved to EPA and the State is given the same opportunity to review and comment on the documents. The State is also invited to participate in all the meetings and is kept fully informed of schedules and field activities, and is encouraged to participate. Under CERCLA/SARA, if the State is satisfied with the remedy or cleanup levels in the Record of Decision, the States' do have an option to pay the incremental cost difference to achieve a more stringent cleanup level. However, where there is overlap of RCRA and CERCLA and the State has delegated responsibility for RCRA, or where an installation has requirements for State permits to operate, it is very difficult, if not impossible, to prevent the possibility of having to address the same site twice.

Mr. **Vest**. The Air Force has only two Inter-Agency Agreements where the State is not a signator. In one case the Air Force and EPA region are working closely together to ensure the State is kept abreast of all actions underway at the NPL site. The Air Force provides all reports to the State and solicits comments and recommendations. The Air Force and EPA region then visit the State to work out any recommendations. In the other IAG, which was only very recently concluded, the Air Force developed an acceptable agreement for the NPL site with the EPA region. The Air Force and the State had signed a previous agreement (Order on Consent) with the State covering the same sites prior to being listed on the NPL. There is potential for conflict with the list of reports, schedules, and ultimate selection of remedial actions covered by both agreements. The State has made its position clear on several occasions that notwithstanding the IAG between EPA and the Air Force, it's the State's agreement which will dictate the cleanup at the NPL site. The Air Force is working very closely with both the EPA and State in addressing the contamination on this NPL site. At this time there are no conflicts among the three parties. We are determined to continue to work closely with both agencies and to preclude any differences in the final cleanup of the NPL site.

Miss **Schafer**. The Navy has made every effort to include States in their Federal Facility Agreements (FFAs). States which have chosen not to be a party to FFAs are invited to sit on our Technical Review Committees (TRCs). Draft documents are sent to them for their review and comment. Any comments received during the comment periods established in the FFA are considered in final drafts.

In order to prevent the possibility of having to clean up a site a second time, State standards are incorporated into our cleanups through the "ARAR" process (Applicable and Relevant or Appropriate Requirements) as established in CERCLA Section 121 and the NCP. Since States are asked for their standards during the ARAR process, this should prevent the possibility of having to clean up a site a second time to meet different cleanup standards set by a State. We have had one case in which a two party FFA was later amended by adding the State as a party. At this time, only three FFAs are between only the EPA and the Navy: NWS Earle, New Jersey; NAEC Lakehurst, New Jersey; and NAPC Warminster, Pennsylvania.

FUNDING FOR INTERAGENCY AGREEMENTS

Senator DIXON. Mr. Baca, is there sufficient funding in the fiscal year 1991 budget and the fiscal year 1992 budget request to meet all the milestones and schedules contained in the IAGs? Are there unfunded requirements in the Defense Environmental Restoration Program for fiscal year 1991 and fiscal year 1992? What are these requirements and what is the dollar amount associated with these requirements?

Mr. BACA. For both IAGs signed to date as well as those anticipated be signed in fiscal year 1992, projected costs have been included in our program. Concerning the Defense Environmental Restoration Program, monies have been adequate to fund all executable cleanups for known requirements to date. We do not foresee any major change in fiscal year 1992. If requirements suddenly change, however, additional resources could be required.

TIMELINESS OF CLEANUP PROCESS

Senator DIXON. We continually hear complaints that the CERCLA cleanup process is too slow, that the process requires an inordinate amount of study, and that the regulators are overwhelmed by the paper review and report requirements. Could each of you provide insight from your experiences whether these complaints are valid, and what actions you have taken or identified that may correct some of these problems?

Mr. BACA. It is true that each of the services has experienced delays in cleanup due to process delays. We are participating in a joint effort with EPA and DOE to review all possibilities to accelerate the study process. We are also continuing to implement the Defense and State Memoranda of Agreement (DSMOA) program where DOD reimburses States to facilitate State participation in the process. We believe this to be a successful program which continues to gain momentum.

Mr. WALKER. The complaints are valid. It almost seems that performing the process has become more important than achieving the actual cleanup. The process is very cumbersome, very bureaucratic, very expensive and takes a long time to complete. It needs to be streamlined. To that end, we are participating on two Task Forces: (1) An Army/EPA Region III Task Force on accelerating the ROD process and (2) A DOD/DOE/EPA Task Force on accelerating cleanup.

Within the current process, we attempt to fast-track projects by establishing operable units, performing removals and interim remedial actions to the maximum extent feasible. All interim actions are incorporated into and are consistent with the final remedy ultimately selected in the ROD. The DSMOA process was set up to help respond to the slow processing of DOD actions by the State regulators.

Mr. VEST. Our experience has been that the implementation of the CERCLA-NCP cleanup process particularly at our NPL sites has indeed been slow with an exhaustive amount of plans, reports, and regulatory oversight. There has been an inordinate emphasis on studying the contamination problem to satisfy the uncertainties of the extent of the contamination problem. As I mentioned in my testimony the Air Force is placing a greater emphasis on making early decisions to cleanup our contaminated sites rather than study. This of course requires taking a risk in making these decisions. We have asked EPA and the States to join us in making these decisions in lieu of endless study. I have found that many of these agencies share in this desire to take early cleanup actions and not to extend the study process. We have found a number of ways to help expedite and streamline the cleanup process. However it will also take the concerted efforts of EPA and the States to improve their regulatory guidelines and procedures that readily allow for expedited cleanup processes and clear cleanup standards without being subject to redundant and overlapping authorities under other laws, such as RCRA.

Miss **Schafer**. The CERCLA cleanup process is slow and does require extensive study. However, if there is an imminent risk to human health or the environment we can take immediate action under the National Contingency Plan as a removal action. Actions which have been taken or identified that may otherwise correct some of the CERCLA procedural problems are as follows: (1) Participation of community and regulatory agencies on Technical Review Committees (TRCs), both at National Priority List (NPL) and non-NPL sites; (2) Reduction in the number of primary documents agreed to in Federal Facility Agreements; (3) EPA/DOD/DOE participation in work groups to streamline the CERCLA cleanup process; and, (4) Agency review of internal processes to accelerate the cleanup process. We feel that continuing inter- and intra-agency efforts are key to process improvements.

Mr. **Reitman**. The CERCLA process, as implemented by EPA regulations, is indeed a slow and meticulous method to reach the ultimate goal of cleaning up past hazardous waste sites. In our experience, we have had several projects in the study phase for an excessive period of time. We signed our first Record of Decision for a site cleanup at one of our National Priorities List sites in September 1990, and it remains the only ROD we have completed to date.

There are a variety of reasons why the process is so lengthy. First of all we are dealing with complicated technical problems regarding contamination of soil and groundwater with a myriad of different hazardous and toxic substances. It is not always immediately apparent what technical solution will address each specific site in a way that will solve the environmental and health concerns in the most effective and efficient manner. The types of contaminants present, the extent of contamination, and the volume of soil or groundwater to be cleaned up must be determined. Secondly, the process to reach conclusions about a site and make decisions on the appropriate technology is an exhaustive one which was designed for worst case scenarios such as the Love Canal or the Valley of the Drums Superfund sites. Applying the same level of study to every site may not be appropriate. Applying a "one fits all" philosophy regarding the studies we have to perform may cause many delays in getting to actual cleanup.

To help speed the process and reach our cleanup objectives, DLA has attempted to work more closely with the regulators by conducting face-to-face meetings to review comments on CERCLA documents. This is one way to reduce review times and therefore move through the study phase more quickly. At one of our installations, we have reduced review times to less than half of the normal period. This will allow us to decide on a cleanup technology much more quickly. We are also participating in a joint Federal agency study group with EPA, DOD and DOE to review the CERCLA process to identify opportunities to accelerate site cleanup. The recommendations from this group should be issued by the end of this fiscal year.

Another technique we use to accelerate cleanup is to begin interim remedial measures at selected sites as soon as feasible. These techniques, such as pump and treatment of groundwater and removal of known source areas, can be accomplished while the study phase continues. All such actions are fully coordinated with the appropriate regulatory agencies.

CONTRACTOR INDEMNITY AND LIABILITY

Senator **Dixon**. Have you experienced any trouble getting qualified contractors to bid competitively on DOD environmental restoration projects? Have you heard of any problems the contractors may have had obtaining insurance or performance bonds?

Mr. **Baca**. To date we have been able to get adequate competition for our remediation contracts although we have heard that some well-qualified companies are not in the market because of risk concerns. As addressed in my testimony, many contractors are having difficulty in obtaining required surety bonds. We have just completed an in-depth report that addresses the liability and indemnification issue. The report was provided to Congress on June 20, 1991. The Department supports the recent legislative effort to provide coverage to sureties on DOD sites similar to that enacted by Congress last year. DOD is also willing to "underwrite" the strict liability exposure of our remediation contractors because of our ultimate liability as waste generator. But we also believe contractors must be held accountable for their performance in a professionally acceptable manner on our contracts.

CONTRACTOR INDEMNITY LIABILITY ISSUE

Senator **Dixon**. (Each witness) Have you experienced any trouble getting qualified contractors to bid competitively on DOD environmental restoration projects? Have you heard of any problems the contractors may have had obtaining insurance or performance bonds?

Mr. **Walker**. Although I have limited personal knowledge of problems associated with the Army finding qualified contractors to bid on restoration projects, I understand that pollution liability insurance is generally unavailable. This scarcity may be having some effect on the Army's contracting for environmental restoration work.

Mr. **Vest**. We have not heard of any significant problems with contractors being able to obtain insurance or performance bonds nor have we experienced any problems at installations where we have on-going remedial action work.

Miss **Schafer**. No, the Navy has not experienced any trouble getting qualified contractors to bid competitively on environmental restoration projects. The Navy has had plenty of qualified contractors bidding for projects.

The Navy has not heard of any contractors having trouble obtaining insurance or performance bonds.

Mr. **Reitman**. DLA generally uses the Huntsville Division of the Army Corps of Engineers to do the contracting for our installation restoration program. They have advised us that they are not experiencing problems in obtaining qualified contractors to bid on our restoration projects.

CONTRACTOR INDEMNITY AND LIABILITY

Senator **Dixon**. Mr. Baca, the House Armed Services bill contains a provision that would require contractors handling hazardous wastes from defense facilities to reimburse the Federal Government for all liabilities incurred by the government and that are the result of the contractors breach of contract or negligence. What is the DOD opinion with respect to that provision?

Mr. **Baca**. We agree with the goals of this provision but are concerned that it could have greater unintended consequences than whatever benefits the Department would realize. We identified these concerns in our recent Liability and Indemnification Report to Congress.

Senator **Dixon**. The House Armed Services bill contains a provision that would require contractors handling hazardous wastes from Defense facilities to reimburse the Federal Government for all liabilities incurred by the government and that are the result of the contractors' breach of contract or negligence. Mr. Reitman, I understand that this provision was intended to address a specific problem that some of the DLA contractors have had. Could you please explain the problem and then indicate whether this provision adequately addresses the problem or is necessary?

Mr. **Reitman**. The House Armed Services Committee was concerned that DRMS does not require contract indemnification for treatment, storage, and disposal facility (TSDF) contractors (disposal site operators). The provision would have required the prime contractor to show indemnification for the Government at the specific TSDF site rather than just proof of an EPA permit, thus protecting the Government from potential liability if a later cleanup is required. Senate and House conferees became aware of several concerns relating to the provision and its impact on completion. The conferees directed a report to be presented on these issues by March 1991. The DRMS report concludes that its contracts, together with environmental laws, provide legal protections comparable to those enjoyed by private industry and the Environmental Protection Agency. DRMS further concludes that, even if some might consider indemnification of the Government by subcontractors or other legal protections desirable, the benefits may be outweighed by administrative delays in the procurement process, reduced competition, and increased disposal costs.

WASTE MINIMIZATION

Senator **Dixon**. What progress are you making on the announced goal of reducing hazardous waste generation by 50 percent by 1992 compared to the 1985 baseline? What is the 1985 baseline?

Mr. **Baca**. Our goal is to reduce hazardous waste generation by 50 percent by 1992 compared to the 1987 baseline. To date, we have achieved 42 percent reduction and fully anticipate meeting our goal. The 1987 baseline was established, and is tracked separately by each DOD component.

HAZARDOUS WASTE MINIMIZATION AND RESEARCH AND DEVELOPMENT

Senator **Dixon**. (Each witness) What progress are you making on the announced goal of reducing hazardous waste generation by 50 percent by 1992 compared to the 1985 baseline? What is the 1985 baseline?

Mr. **Walker**. As of the end of 1989, the Army had achieved 37 percent reduction. Final 1990 figures have not yet been verified completely due in part from the changeover from the Defense Environmental Status Report (DESR) to Defense Environmental Management Information System (DEMIS).

The Army 1985 hazardous waste generation baseline was 98,000 metric tons. The 1989 figure was 62,000 metric tons. The 1989 DESR data submitted to Congress erroneously included some one-time generations.

Mr. **Vest**. As of June 1991 we are approximately at 37 percent.

Miss **Schafer**. The Navy goal is to achieve a 50 percent reduction (by weight) in the amount of hazardous waste disposal over the period calendar year 1988 to calendar year 1992 with calendar year 1987 as the baseline year (vice calendar year 1985). Through calendar year 1990, the Navy has achieved a reduction of 19 percent. We have identified some problems in our data collection which may mask our actual reduction since 1987. Some wastes which were designated "hazardous" after 1987 are now being counted. We intend to revise our baseline to reflect this change.

The 1987 baseline amount of hazardous waste disposed was 52,440 tons. We disposed 37,448 tons of hazardous waste in 1990.

Mr. **Reitman**. The DLA baseline is 2,545.7 tons. Our installations used the earliest year in which data was available to determine the base period, which was either fiscal year 1985 or fiscal year 1986. Regarding our progress, DLA was able to achieve the 50 percent reduction goal during 2 of the last 3 years. Although our ability to achieve waste minimization goals is greatly affected by the pace of our mission activities, we expect to show good waste minimization progress by 1992.

Senator **Dixon**. (Each witness) What types of incentives do you have in place to encourage local base commanders to undertake hazardous waste minimization efforts?

Mr. **Baca**. A primary incentive is that the law (Resource Conservation and Recovery Act) requires each facility generator of hazardous waste to certify on an annual basis that they do have a waste minimization program in place. Also we continue to decentralize portions of this program to ensure local commanders are responsible to pay for their own hazardous waste cleanup out of their own operating budget.

Mr. **Walker**. The Army recycling program, in place for several years, provides monetary incentives at the installation level by returning a portion of funds recovered from recycling hazardous waste and hazardous materials. In 1992, an Army-level hazardous waste minimization awards program will begin. We plan to make several hundred thousand dollars available annually for both installations that achieve significant hazardous waste reduction and/or minimization and individuals who contribute to the success of the Army or installation program.

Mr. **Vest**. Incentives to local commanders vary from policy incentives to financial ones. The clearest policy incentive was provided by the Air Force Chief of Staff in establishing a goal of reducing hazardous waste generation to as near zero as possible (AF/CC letter on Environmental Leadership April 17, 1991). Additionally, the Air Force provides financial incentives through allowing funds generated by MWR during recycling to be channeled back into their account. We also encourage minimization by illustrating the advantages of minimizing hazardous waste (i.e. reduced disposal cost) which avoids costs, leaving the funds available for other needs in their already stretched O&M accounts.

Miss **Schafer**. Besides a clear policy directive from the Chief of Naval Operations requiring hazardous waste minimization, base commanders are eligible for RDT&E funds to try promising new technologies and are eligible for special O&MN funds set aside to implement hazardous waste minimization on existing processes. These O&MN funds are actually derived from DERA which has a portion "set aside" for hazardous waste minimization. In addition, Navy ships, bases, and individuals are eligible for annual Navy and DOD environmental Quality Awards. Hazardous waste minimization efforts are a key element in competing for these awards.

Mr. **Reitman**. DLA is well aware of the costs of hazardous waste disposal and the savings which can result from an effective hazardous waste management program. We have worked closely with our base commanders to assist them in establishing effective waste management programs. During the period when programs were being developed, a special team was established to visit each base commander and provide on-site assistance in auditing hazardous waste sources and developing technical assistance and recommendations regarding minimization opportunities. I believe this effort provided a sound technical foundation for the waste management programs established by our base commanders.

RESEARCH AND DEVELOPMENT

Senator **Dixon**. Mr. Baca, what progress is the Department making in reducing the use of chlorofluorocarbons (CFCs) and halons?

Mr. **Baca**. There are no new CFC replacements on the market and until substitutes are available our use will remain near the same levels. During the past year, however, there has been a decrease in the use of halons by over 4 percent. This reduction is the result of both our policy changes and replacement products being introduced in the market.

HAZARDOUS WASTE MINIMIZATION AND RESEARCH AND DEVELOPMENT

Senator **Dixon**. Miss Schafer, the Navy is the largest user of CFCs and halons. Can you tell us how you are coming in finding alternatives for these chemicals?

Miss **Schafer**. The Navy is seeking alternatives for CFC–12 and CFC–114 for shipboard refrigeration and cooling, Halon 1211 and Halon 1301 for fire protection, and CFC–113, methyl chloroform and carbon tetrachloride as cleaning solvents.

In the area of substitute refrigerants, we are testing CFC–12 shipboard air conditioning plants with an environmentally acceptable substitute, HFC–134a. The results from the testing to date are very encouraging. Backfitting the fleet is planned to begin in fiscal year 1994. In addition, we are pursuing two potential replacements for CFC–114: HCFC–124 and E–134. Both are nonflammable ethers having a zero ozone depletion potential. To date, the Navy has completed over 2,000 hours using HCFC–124 in a commercial air conditioning plant and has funded the National Institute of Standards and Technology (NIST) to determine the exact thermodynamic and heat transfer properties of E–134. The Navy plans to continue evaluating both of these substitutes, and based on this evaluation select the most appropriate substitute for backfit. Research and development on new non-CFC air conditioning plant designs has also begun.

In the area of fire protection, the Navy has developed agreements with several chemical manufacturers to test potential halon substitutes. The Navy has conducted a series of tests at a Marine Corps Crash and Fire Rescue training site of two candidate replacements for Halon 1211: Dupont's FE–232 and Great Lakes FM–100. The results are currently being evaluated and additional tests are planned. In addition, the Navy has conducted small scale tests on the following potential Halon 1301 substitutes; FM–100, FE–200, FE–13, FE–232, and a 3M product. Larger scale tests are planned. The Navy has already adopted SF6 as a substitute for testing shipboard Halon 1301 units.

In the area of solvents, alternatives have already been identified for certain applications. The Navy has established an information clearinghouse to identify solvent applications and to assist CFC and halon users in finding suitable replacement chemicals. As part of the clearinghouse effort, the Navy is conducting a detailed survey of CFC–113 uses. The Navy is continuing its participation in the Solvents Working Group, an industry/government consortium working to identify suitable safe substitutes.

RESEARCH AND DEVELOPMENT

Senator **Dixon**. Mr. Baca, does technology currently exist to clean up or perform whatever action is necessary at all DOD active and formerly used sites?

Mr. **Baca**. Yes, current cleanup technology exists; however, in some cases it is akin to propeller aviation in the 1950s. We need to move into the jet age. We are constantly looking for more innovative and cost-effective technologies. Research and development in this area is one of the key pieces to our entire environmental program.

HAZARDOUS WASTE MINIMIZATION AND RESEARCH AND DEVELOPMENT

Senator **Dixon**. (Each witness) What is each service doing in research and development for cleanup technologies?

Mr. **Walker**. Incineration is currently used for treatment and cleanup of sites contaminated by explosives and propellants. Insitu volatilization and thermal stripping are proven technologies for cleanup of soils contaminated with volatile organic compounds formerly used as solvents, degreasing and cleaning agents. Pump and treat technologies (carbon adsorption, ion exchange and air stripping) exist for groundwater treatment to remove explosives, volatile organic compounds and heavy metals. While these technologies have been shown to be effective and adequate, they are relatively expensive. The potential exists for 20 to 50 percent reduction of cleanup costs by replacement of the above technologies with new innovative technologies currently being developed. Rubblization followed by incineration of the rubble is the only current technology available for effective decontamination of structures.

For treatment of currently generated waste streams resulting from the production and maintenance of munitions as well as the maintenance of tactical equipment, some deficiencies exist. More effective controls for volatile organic air emissions and alternatives to land disposal of industrial waste treatment sludges are required to insure regulatory compliance. A cost effective waste treatment technology does not exist for the Army's TNT production process. For many types of munitions, there is no alternative technology to replace open burning/open detonation of items that are no longer serviceable. There is a recognized need for improved technologies to treat wastes generated in the production of nitrocellulose and ball powder. Significant reductions in the generation of hazardous wastes can be further achieved by development and implementation of additional new innovative technologies applicable both to munitions production and tactical equipment maintenance.

Mr. VEST. There are technologies currently available to cleanup Air Force sites. However, some of these technologies are very expensive, such as burning contaminated dirt. We are pursuing through research and development (R&D) efforts in the Air Force and in cooperation with the Army, Navy, DOE, and EPA, more efficient and cost effective ways to cleanup the contaminated sites. The following is a list of some of the R&D efforts being accomplished in fiscal year 1991:

— Biodegredation of Mixed Chlorinated Solvents
— Groundwater Transport of Organic Compounds in Box Emulation
— Anerobic Dechlorination of Carbon Compound Organics
— Air Stripping Contaminated Groundwater
— Validation of Crossflow Air Stripping with Catalytic Oxidation
— Enhanced Biodegradation through Soil Venting
— Fiber Optic Monitoring System Development
— Treatment of Chlorinated Organics with Above Ground Reactors
— Groundwater Solute Model Optimization
— System Interpretation of Monitoring Technologies
— Metabolic Pathways Control
— Contaminant Mobility Reduction
— Improved Methods for Monitoring Fuel Biodegradation
— Biodegradation of Energentic Materials
— Standard Test for Monitoring Devices

Miss SCHAFER. The Navy has integrated environmental restoration RDT&E into the basic framework of the Navy. The Chief of Naval Operations has delegated the coordination of RDT&E to the Naval Facilities Engineering Command (NAVFAC) under the Defense Environmental Restoration Program. A number of organizations perform the research and development work under NAVFAC guidance. Major Environmental Restoration R&D is provided by the Naval Civil Engineering Laboratory. Naval Ocean Systems Center provides expertise on impacts of hazardous waste sites on near shore receiving waters. The Ordnance Environmental Support Office supports the special cleanup challenges posed by ordnance wastes sites and range cleanup. David Taylor Research Center assists with basic and technology development research potential. Naval Energy and Environmental Support Activity assists with transition of technology to current applications. Examples are: the application of Base Catalyzed Decomposition for on-site treatment of PCB contamination at Public Works Center Guam and a photochemical oxidation process for groundwater treatment used at Naval Air Engineering Center, Lakehurst, New Jersey. Both of these were developed by Naval Civil Engineering Laboratory.

Mr. REITMAN. DLA does not have a separate R&D activity. We coordinate closely with the services on their R&D efforts.

ENVIRONMENTAL CONSIDERATIONS IN ACQUISITION PROCESS

Senator DIXON. Mr. Baca, in your statement, you say that environmental considerations are being introduced into the decisionmaking process of the Planning, Programming and Budgeting System. Can you provide any instances in which significant procurement actions were modified based upon environmental concerns?

Mr. BACA. We have already introduced a number of changes to the PPBS. Most notable are (1) development of budget exhibits estimating past allocations and future funding requirements across all environmental activities, and (2) establishing "flags" in the accounting systems of the DOD components to track actual disbursements for environmental objectives. Procurement actions are not modified after the fact. Rather we are changing our acquisition process up front. A prime example is procurement of the Advanced Tactical Fighter. In this case, we incorporated strict environmental requirements in the specification preparation phase. As an example, use of CFCs and Hydrozene was not allowed per contract specification when the solicitation was ready.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

Senator **Dixon**. Mr. Baca, the Defense Environmental Restoration Account (DERA) funds not only the environmental restoration activities but also provides funding for waste minimization and research and development. Could you describe some of the research that is being conducted with DERA funds?

Mr. **Baca**. The Department is conducting a wide range of research projects with DERA funds. Many of the more interesting and highly significant ones are reported on every year in our Annual Report to Congress. One of particular interest is the evaluation of a heated fluidized bed of aluminum oxide to remove paint and grease from equipment at maintenance depots. This system reduces hazardous waste and provides a safer work environment.

Senator **Dixon**. Could each of the services describe briefly what research requirements they have identified for fiscal year 1992?

Mr. **Walker**. There are no specific technology problems peculiar to the Formerly Used Defense Sites (FUDS) program. We are not currently funding any research with FUDS dollars, but have funded some research on unexploded ordnance. In fiscal years 1984-1990 the FUDS program provided financial support to the DOD R&D program on location and detection technology development for unexploded ordnance. This led to the establishment of Huntsville Division as our center of expertise on unexploded ordnance.

In the Active Sites Program, DERA funds are used to complete development and assist in the initial field use of new technologies for cleanup and treatment of hazardous wastes. Currently active projects are as follows:

a. Unexploded ordnance (UXO) Detection—development of more accurate, safer and less expensive UXO site characterization and detection technologies.

b. New Hazardous Waste Minimization (HAZMIN) technologies for tactical equipment maintenance—new technologies are being developed for near term implementation to reduce volatile organic compound (VOC) emissions during paint application, to reduce the amount of spent chemical cleaners and paint strippers and to eliminate the need to dispose of plating wastes by implementation of non-plating processes as well as plating bath regeneration processes.

c. Non-Destructive Decontamination of Chemical Agent Contaminated Structures and Explosive/Propellant Contaminated Process Equipment—A new innovative technology (called the "hot gas" technology) is in the advanced development phase. The use of this technology to decontaminate process equipment has been successfully demonstrated and final development will be completed to implement it at Hawthorne Army Ammunition Plant in fiscal year 1992. A field demonstration/final development effort for chemical agent contaminated structures has been initiated at Rocky Mountain Arsenal.

d. Cone Penetrometer—This technology has been successfully demonstrated at three petroleum contaminated sites yielding real time data such as soil layering and type, contaminant location and concentration, and produces a 3-dimensional plot of subsurface contaminants. Sensors are being developed and land tested for explosives and solvents. This system provides the data to assist in well placement resulting in fewer wells being installed and a large savings on cost both initially and future monitoring costs.

e. In-Place Regeneration of Activated Carbon—A technology has been identified that would economically regenerate activated carbon on site that has been used to remove VOCs from contaminated air streams from packed column air strippers and insitu air stripping. Regulatory agencies are more and more no longer allowing discharge to the air. A pilot demonstration is planned for Letterkenny Army Depot.

f. Composting of Explosive Contaminated Soils—This technology, which is a bioremediation rather than an incineration technique, is in the final stage of development. It is planned to be initially implemented in fiscal year 1992 to clean up an NPL site at Umatilla Depot Activity and will represent the first Army use of biotechnology to clean up such a site. Estimated cost reduction by using composting rather than incineration is 50 to 60 percent.

g. Reuse of Waste Explosives and Propellants as Heating Plant Fuel Supplements—An initial field demonstration of this technology for waste explosives using a small actual industrial boiler has been successfully conducted at Hawthorne Army Ammunition Plant. Further advanced development is being conducted jointly with the Navy to develop this process as an alternative to open burning of propellants as well as explosives.

h. Supporting cost analyses—As new technologies are developed and implemented, accurate cost data are required to support the evaluation process in order to select the best technology for a given application.

i. Analytical Methods/Instrumentation Development—Sampling and analytical methods and instrumentation are developed to meet analytical requirements, primarily for military unique contaminants, for which methods and/or instrumentation are not available from the private sector.

[Dollars in thousands]

Development Project	Fiscal year 1992 funding requirement
Unexploded Ordnance (UXO) Detection	$1,000
New HAZMIN Technologies for Tactical Equipment Maintenance	600
Cone Penetrometer	900
Nondestructive Decontamination of Chemical Agent Contaminated Structures	3,500
In-Place Regeneration of Activated Carbon	320
Nondestructive Decontamination of Explosive/Propellant Contaminated Process Equipment	300
Composting of Explosive Contaminated Soils	200
Reuse of Waste Explosives and Propellants as Heating Plant Feed Supplements	700
Cost-Effectiveness Analyses to Support Innovative Technologies Development	150
Analytical Methods/Instrumentation Development	1,200
Total	$8,870

Mr. **Vest**. The following research and development requirements for waste minimization are identified for fiscal year 1992:

— Spray Casting
— Contaminant Removal from Plating Baths
— Biodegradable Paint Stripper
— Laser Enhanced Jet Electroplating
— Skid Mounted Iron Sulfide Unit
— Plastic Media Blasting Metals Waste Treatment
— Bicarbonate Stripping Validation

Miss **Schafer**. The Navy is using the Defense Environmental Restoration Account (DERA) to fund research and development in the areas of installation restoration (cleanups), hazardous waste minimization, and pollution prevention. The research and development is geared to those problems that are Navy or DOD unique and that are not likely to be addressed by the private arena or the Environmental Protection Agency.

With respect to cleanups, some of our fiscal year 1992 requirements include a slurry bioreactor for remediating soils contaminated with JP-5 (a jet fuel) and DFM (a ship's fuel); a mobile truck with the capability to take rapid, cost effective samples and thus quickly characterize Navy sites for subsurface contamination; biological decontamination of hydrocarbon contaminated soils; anaerobic biotreatment of dilute TNT contaminated soils; and evaluating ways to cleanup lead contaminated rifle ranges.

Some of the hazardous waste minimization and pollution prevention requirements include developing substitutes for chromate inhibiting pigments in current aircraft coatings; developing coatings and paints in which the organic compounds are of lower volatility; abrasive blasting recycling equipment for shipyards; developing a treatment system for processing hazardous bilge water from Navy ships; aircraft depainting equipment which reduces liquid hazardous wastes; and technologies that reduce plating bath wastes and at the same time improve the plating quality.

CLEANUP OF CONTAMINATED GROUNDWATER

Senator **Dixon**. Mr. Baca, the conventional method of cleaning up contaminated groundwater is referred to as "pump and treat." It is commonly acknowledged, however, that this method is inefficient and expensive.

Mr. **Baca**. We believe there are better technologies and have been working jointly with EPA and DOE to identify and pursue innovative ideas and ensure they are compatible with each agency's policies.

TRAINING OF DOD PERSONNEL

Senator DIXON. Mr. Baca, the fiscal year 1991 National Defense Authorization bill provided $100,000 to DOD for environmental training programs for DOD personnel. Has this program been implemented? Are additional funds necessary to continue this program?

Mr. BACA. DOD has sponsored a meeting with a coalition of universities to discuss the feasibility of establishing a program for environmental education. The coalition is currently preparing a proposal for DOD consideration. Our next meeting is scheduled for July 1991. Concurrently, we are reviewing our existing environmental training programs with intent to identify deficiencies. Training to correct any deficiencies that may be found may be offered by additional in-house DOD courses or possibly by contracting with civilian universities. In either case, funding will come from the O&M account within DOD.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

Senator DIXON. Ms. Schafer, Mr. Vest, Mr. Walker, what are your primary cleanup projects in fiscal year 1991 and fiscal year 1992? Does the fiscal year 1992 budget request fully fund the cleanup and environmental restoration established?

Mr. WALKER. The following tables list the Army's primary cleanup projects in fiscal year 1991 and fiscal year 1992:

Fiscal Year 1991 Major Remedial Action Projects in the Active Sites Program

Installation Name	Site Description
Aberdeen Proving Ground	Edgewood Area Removal Actions.
Aberdeen Proving Ground	Other Aberdeen Area Sites.
Fort Lewis	Logistics Center Cleanup.
Fort Richardson	Pre-78 PCB Spill—Roosevelt Rd.
Letterkenny Army Depot	Southeast Industrial Area Remedial Actions.
Picatinny Arsenal	Hazardous Waste Closure
Riverbank AAP	Domestic Well Abandonment.
Rocky Mountain Arsenal	Operations and Maintenance.
Rocky Mountain Arsenal	Design & Execution/Interim Actions.
Sacramento Army Depot	Operable Unit Tank No. 2 Area.
Stan R. Mickelson Safe-Guard Complex	PCB/UST Remediation.
Tooele Army Depot	Groundwater Treatment.
West Virginia Ordnance Works	Yellow Water/Acids Area, Pond 13 & Remedial Action Sites.
West Virginia Ordnance Works	Groundwater Treatment System.

Fiscal Year 1992 Major Remedial Action Projects in the Active Sites Program

Installation Name	Site Description
Aberdeen Proving Ground	Michaelsville Landfill IRP.
Aberdeen Proving Ground	O-Field Area IRP.
Aberdeen Proving Ground	Edgewood Area Removal Actions.
Fort Lewis	Logistics Center Cleanup.
Fort Richardson	Eagle River Flats Contamination.
Letterkenny Army Depot	Fire Training Pit & Other Remedial Action Sites.
Letterkenny Army Depot	Defense Property Disposal Area Cleanup.
Lone Star AAP	Old Demolition Ground Studies.
Rocky Mountain Arsenal	Removal of Other Contamination Sources.
Sacramento Army Depot	IRP Burn Pits.
Savanna Depot Activity	Ammo Washout Waste Incineration.
Tobyhanna Army Depot	Installation Restoration Studies.
Twin Cities AAP	Interim Remedial Actions.

The following list of FUDS projects considered our primary concerns in fiscal year 1991 and fiscal year 1992. It should be noted that in FUDS program in these 2 years, we have some 1,500 projects and all are important. Major efforts and the more controversial sites are as follows:

*Weldon Spring Ordnance Works, St. Charles County, MD
Hamilton Air Force Base, Novato, CA
*Crab Orchard National Wildlife Refuge, Marion, IL
*Hastings East Industrial Park, Hastings, NE
*Nebraska Ordnance Plant, Mead, NE
Fort Segarra, Water Island, U.S. Virgin Islands
Hammer Field, Fresno, CA
Lake Ontario Ordnance Plant, Lewiston, NY
*Marathon Battery, Cold Spring, NY
*Arctic Surplus Yard, Fairbanks, AK
*Morgantown, Ordnance Works, Morgantown, WV
*West Virginia Ordnance Works, WV
Raritan Arsenal, Edison, NJ
*Phoenix-Goodyear Airport, Litchfield, AZ
Fisher-Calo Chemical and Solvents Corp., Kingsbury, IN
Dutch Harbor, AK
Cheatham Annex, Williamsburg, VA
Valley Forge Hospital, Phoenixville, PA
Camp Elliott (Tierra Santa & Mission Trails), CA
Turner Air Force Base, GA
*National Presto, Eau Claire, WI
*New Hanover County Airport, Wilmington, NC
*Malta Rocket Fuel Farm, Malta, NY
Point Heiden/Moller, AK

*Indicates National Priority List Site.

Mr. **Vest**. Our primary cleanup projects for fiscal year 1991 were at our National Priority Bases. This fiscal year we continued our commitment to cleaning up sites. As a result of the commitment we established a goal of finishing our sites by the end of fiscal year 2000. By finished, I mean remedial action is completed or underway. We have also established interim goals of finishing 10 percent of our sites each fiscal year to fiscal year 1996 and 5 percent from fiscal year 1997 to fiscal year 2000. In fiscal year 1992, we will continue to emphasize cleanup efforts at our NPL installations and push to move projects from the "study phase" to "turning dirt." One of the goals we established for fiscal year 1992 is to spend 60 percent of our DERA funds on RD/RA or IRA efforts. We will continue to fund investigations and studies but we feel we can reduce the cost based on lessons learned for previous studies, thereby, leaving more funds for site cleanup.

Miss **Schafer**. The primary cleanup projects are as follows:

Fiscal year 1991:	*($000)*
Naval Shipyard Philadelphia, PA	3,466
Naval Air Engineering Center Lakehurst, NJ	5,489
Naval Supply Center Pearl Harbor, HI	1,200
Naval Surface Weapons Center Dahlgren, VA	1,200
Naval Supply Center Manchester, WA	1,400
Marine Corps Logistics Base Barstow, CA	1,000
Naval Shipyard Hunters Point, CA	1,800
Naval Air Station Moffett Field, CA	1,500
Naval Shipyard Hunters Point, CA	1,200
Naval Air Station Corpus Christi, TX	1,220
Fiscal year 1992:	
Naval Air Engineering Center Lakehurst, NJ	4,900
Naval Industrial Reserve Ordnance Plant Fridley, MN	4,200
Naval Shipyard Philadelphia, PA	4,500
Marine Corps Base Camp Lejeune, NC	6,996
Naval Air Station Adak, AK	8,050
Naval Ocean Systems Center San Diego, CA	14,000
Naval Undersea Warfare Engineering Station Keyport, WA	10,000
Naval Shipyard Puget Sound, WA	4,200
Naval Shipyard Hunters Point, CA	5,000

Miss **Schafer**. The fiscal year 1992 budget request will fund our cleanup and established environmental restoration goals that are now known to be executable in these years.

JOINT ARMY AMMUNITION PLANT

Senator Dixon. Mr. Walker, an Interagency Agreement for cleanup of Joliet Army Ammunition Plant was signed in June 1989. What is the current status of the cleanup at this facility? How much do you plan to spend on cleanup at Joliet this year and over the next 5 years? Do you have an estimate of the total cleanup Costs for Joliet? When do you expect the cleanup at Joliet will be completed?

Mr. Walker. A schedule for the remedial investigation/feasibility study (RI/FS) program was submitted to EPA and Illinois EPA in accordance with Interagency Agreement (IAG) requirements in August 1989.

Argonne National Laboratory (ANL) completed a Land Resources Assessment and Management Plan in October 1989 to assess environmental conditions at agricultural lease tracts. The plan considers five tracts unsuitable for lease, 20 tracts restricted use and 74 tracts unlimited use.

Talley Defense Systems (TDS) completed an Environmental Baseline Survey in December 1989. This was done to assess environmental conditions prior to construction activities associated with their manufacture of 155mm rocket base assemblies. As a result of their findings, modifications to TDS's site plan was required.

A task to develop a work plan for additional sampling to finalize the RI of the manufacturing area and to finalize the Phase I Results Report was awarded to Dames and Moore in February 1990.

Award of the task to conduct the RI of the LAP is anticipated for August 1991.

We will spend $5,511,000 this year and plan to spend the following amounts during the next 6 years:

Fiscal years:	
1992	2,165,000
1993	1,850,000
1994	8,850,000
1995	3,050,000
1996	2,100,000
1997	2,100,000

We estimate that the total cleanup costs for Joliet will be $42,598,000 and we expect the cleanup to be complete by the year 2000.

Senator Dixon. The Department of Defense utilizes the Defense Reutilization and Marketing Service to issue solicitations to prospective bidders for the recycling of hazardous wastes generated by DOD installations.

I understand that interested firms are required by DRMS to submit bids for each specific line item of waste materials listed on the solicitation. Many recycling firms are unequipped to receive and process all items of waste. Successful bidders are left with no choice but to incinerate those items it cannot handle, or in some cases, underbid items it cannot process while overbidding items it intends to recycle.

Opening up competition and permitting a firm to bid only for the specific items that it is qualified to handle seems more advantageous economically and environmentally. In the spirit of responsible waste management and fairer competition for smaller waste recycling firms, why does DRMS continue this "all or nothing" solicitation process?

Mr. Reitman. DRMS issues solicitation for the disposal of a wide variety of hazardous waste streams. Disposal methods may include, but are not limited to, recycling. DRMS, at present, breaks out certain waste streams at specific locations to allow for separate awards when practical. We are in the process of expanding the waste streams and locations where breakouts are done. These breakout waste streams are carefully selected based upon: (1) the nature of the commodities, (2) the problems associated with the economies of permitting contractors to select only certain wastes, leaving the undesirable commodities such as acute hazardous, pesticides, etc., and (3) the costs associated with management of multiple contracts. If caution is not exercised, DRMS is placed into a situation where disposal of certain commodities could not be accomplished due to lack of offers or monetary constraints. It should be noted that no DRMS prime contractor can dispose of every waste stream as listed in our contracts and therefore, must subcontract some disposal (by recycling or other means) to approved subcontractors. As a point of further clarification, DRMS through its sales program, has traditionally sold recyclable materials, to include hazardous wastes, to environmentally responsible parties. As DRMS is continuously seeking potential market opportunities, recycling firms having an interest in purchasing a specific waste stream should make their needs known to DRMS.

ENVIRONMENTAL RESTORATION AT CLOSING BASES

Senator **Dixon**. (Each witness) CERCLA requires that all remedial action necessary to protect human health and the environment be completed prior to any transfer of land belonging to the United States and that the United States covenant to complete any additional remedial action remaining after the transfer. There is a good deal of concern that this provision will prevent or postpone sale or disposal of closing bases. Have each of you looked at this potential conflict and have you identified any resolution to this problem?

Mr. **Baca**. Mr. Chairman, this issue is a key focus of our Base Closure Task Force. Our goal is to develop recommendations for better and faster ways to close and transfer our bases while still meeting environmental requirements. The prompt reuse of closing DOD installations by local communities is a key objective of the Department. Our recommendations will be provided to the Congress by November 5, 1991.

Mr **Walker**. The Army is committed to taking whatever actions are necessary to protect human health and the environment prior to transfer of land. Currently, the Army is in the Remedial Investigation/Feasibility Study (RI/FS) phase of its program during which the contamination status of a site is determined, the risks established, and remedial action alternatives assessed. It is only after this phase is completed that a determination can be made on the level of cleanup. Base Closure I (BRAC I) RI/FS's are scheduled to be completed in fiscal year 1992 and fiscal year 1993.

In the event there are areas on a facility that would require extensive cleanup that would span a number of years, these areas could be retained and the remainder of the site parcelled for sale. The concept of releasing installations in parcels is being used at Fort Meade. Another approach being considered where long-term remedial actions are required, such as groundwater treatment which may take years to complete, is to transfer or sell the property with a restriction on the use of groundwater. After groundwater cleanup is completed by the Army, this restriction can be removed. This approach could be utilized in an area where municipal water is available and where groundwater is not a source of drinking water.

In an effort to expedite schedules, some cleanup actions can be accomplished prior to the preparation of a Record of Decision (ROD) at the end of the RI/FS. These include removal and cleanup associated with underground storage tanks, asbestos cleanup, and actions associated with polychlorinated biphenyls (PCB) remediation. Many of these types of actions are being addressed at BRAC I sites during fiscal year 1991.

Mr. **Vest**. The Air Force is currently experiencing difficulties in disposing of properties at Pease AFB as a result of the 120(h) provision of CERCLA. The Pease Development Authority is negotiating with Deuthsche Airbus for a large hangar and approximately 52 acres of land near the flightline at Pease AFB. Deutsche Airbus proposes to modify the hangar and construct a number of new buildings for the purpose of modifying and maintaining commercial aircraft. Deutsche Airbus wants to own the hangar facility before investing dollars in any modifications.

Pease AFB was listed on the NPL in 1990; trichloroethylene in concentrations exceeding Federal drinking water standards occurs in the groundwater underlying the properties of interest to Deutsche Airbus.

While we have been working diligently with the Environmental Protection Agency, we have not reached a satisfactory solution which would allow the Air Force to convey portions of Pease AFB even if "all remedial actions necessary to protect human health and the environment have been taken" (CERCLA 120(h)(3)) or if the properties were uncontaminated to begin with. A plan to use a long-term lease of the land and a deed for the key hangar buildings may be possible, but it could leave the Air Force in the legally-risky posture of being the long-term landlord of a civilian airport. The strict interpretation of 120(h), which interprets "has been taken" to mean "has been completed," would require the entire base to be clean before any portions of the base could be transferred. In testimony before the Senate Armed Services Committee and the 1991 Defense Base Closure and Realignment Commission, the Air Force stated that section 120(h) of CERCLA needs to be modified to resolve this conflict. We believe the language as proposed in H.R. 2179 will give us the latitude to convey properties to productive civilian use while protecting human health, and completing remediation of hazardous waste sites.

Miss **Schafer**. The Navy has looked at this potential conflict. Because there has been some debate about the meaning of the statute, the Navy would like clarification of the CERCLA section 120(h) requirements for transfer of property which requires environmental restoration. The clarification should expressly allow "interim" use or transfer of property which has been found to be safe for limited use, but may still require cleanup. Land that is free of contamination on the surface but possibly has subsurface (groundwater) contamination could be used with appropriate agreements for access to complete the remedy, and to control exposure to contamination. The Government retains responsibility for full cleanup, and agrees to pursue specified cleanup procedures in the future. ~~The~~ clarification should also expressly allow parcelling of property so that clean areas could be transferred prior to the clean up of the entire property.

The Department of the Navy is committed to expediting the transfer of land back to productive economic use for the community. The proposed clarification of CERCLA strengthens this position.

Mr. Reitman. Each DLA managed facility which is listed on the National Priorities List and is conducting a cleanup has entered into a Federal facility agreement as required by CERCLA Section 120. The agreements include a standard clause which requires that DLA comply with CERCLA Section 120(h) before any real estate transfer occurs. None of these facilities is targeted for base closure at this time. We recognize the conflict, but we have not identified any resolution. At installations affected by the conflict, a possible resolution might be to complete all of the base closure procedures except for transfer or sale of the real estate pending completion of the remedial action. Another possibility would be structuring the transfer or sale of such facilities so that the transfer of the legal title to the property is subject to a condition subsequent, i.e. completion of the remedial action.

Senator Dixon. Mr. Vest, the Congress adopted a provision, dealing specifically with cleanup at Pease Air Force Base in New Hampshire. I am concerned that the arrangement at Pease will increase the Air Force's potential liability both for cleanup and for third party damage claims. Could you address this and also provide an update of the status of both the cleanup and the plans to lease the facility?

Mr. Vest. The Congress adopted a special provision in the Defense Appropriations Act of 1991 which indemnified the State of New Hampshire and lenders for any liability associated with releases of hazardous substances caused by the Air Force at Pease AFB. This provision simply clarified and reinforced the commitments the Air Force has previously made to clean up the contamination at our installations caused by our past (and ongoing) activities. While this, special provision appears to have given the State (and specifically the Pease Development Authority) the assurances they sought to aggressively pursue conveyance of properties from the Air Force at Pease AFB, we believe adequate assurances are contained in the CERCLA statute requiring the Air Force to cleanup waste sites and that additional language is unnecessary.

The Air Force is also concerned that leasing or sale of properties at Pease AFB (or any other closing Air Force installation) without complete hazardous waste site characterization and/or cleanup could increase our liability for cleanup and third party damage claims. What we need to do is determine if properties are contaminated before we convey them. We need to conduct initial studies to answer this question and satisfy ourselves (and prospective buyers) that there is no contamination of any consequence. If initial studies prove otherwise, we need to more fully characterize the area of contamination and decide if the property can be safely conveyed. We also need to establish the baseline conditions by which we will be able to separate the contamination the Air Force is responsible from the contamination a subsequent lessee or buyer would be responsible for.

This is exactly what the special provisions adopted by the Congress for the cleanup of Pease AFB meant to accomplish. The State of New Hampshire did not want to be implicated in a third-party cleanup suit for contamination resulting from past Air Force activities at Pease AFB. And they (or their lessees of subsequent buyers) should not be. They must, however, be held accountable and responsible for any releases of hazardous substances from their operations.

We have taken several actions to minimize our liabilities with regard to this issue. First, we have included in our leases, boiler-plate language requiring the lessee to comply with applicable Federal and State environmental laws. Also required is an environmental condition report which is intended to establish "baseline" environmental conditions prior to lessee occupation of the property. Furthermore, we are considering expanding our oversight of lessees to ensure their activities pose no potential for environmental contamination.

Moreover, for Pease AFB, we have recently completed the field work for an environmental baseline study which included soil and groundwater sampling to determine the location, type and significance of contaminants in and around the properties of interest to Deutsche Airbus. The analysis of the field data should be completed by early August 1991. We expect to be able to decide at that time the appropriate disposition of the properties and whether specific remedial actions will be required.

COMPLIANCE WITH CLEAN AIR ACT

Senator **Dixon**. In our hearing last year we discussed the Clean Air Act, which at the time had not yet passed, at some length. Now that there is a Clean Air Act have each of you been able to identify your long-term costs of compliance? What steps have each of you taken to make sure that you come into compliance in a timely fashion? Have any of you identified any technological impediments to compliance?

Mr. **Baca**. Air Toxics, as addressed in the new Clean Air Act, will impact the DOD but the significance of this impact cannot be fully assessed until the EPA develops standards. The Navy has been assigned as the lead work group for DOD on this issue. Provisions for CFCs and halons are similar to those in the Montreal Protocol and the services are planning and budgeting to meet those provisions.

Mr. **Walker**. In 1990, the Assistant Chief of Engineers established a task force, composed of personnel representing key Army organizations, to estimate the long-range compliance cost impacts of the Clean Air Act Amendments of 1990. In December 1990, this task force issued its report projecting that the total 10-year compliance costs (from 1992 through 2001) are approximately $1.1 billion, expressed in 1991 dollars. The new statute will primarily impact U.S. Army installations in the following categories: Power Plants, Petroleum Storage Facilities, Non-Tactical Vehicles, Air Toxics, Administrative Costs (e.g., permit preparation), and Secondary Costs (e.g., increased cost of electricity).

The Army actively participates in the Clean Air Act Amendments Implementation Service Steering Committee. The committee, which has representatives from each of the military services, was organized recently by the Deputy Assistant Secretary of Defense (Environment) for the purpose of assuring that the Department of Defense complies with all provisions of this very complex statute. Additionally, in fiscal year 1992, the Army's Environmental Compliance Assessment Program will be fully implemented. Under this program, multimedia environmental assessments are conducted at installations, enabling the Army to identify and correct air emission-related noncompliance situations.

One of the responsibilities of the Clean Air Act Amendments Implementation Steering Committee is to identify impediments to compliance. Since the committee has been organized only recently, it is too early to definitively identify any technological impediments.

Mr. **Vest**. While we have witnessed the passing of the new Clean Air Act, the actual implementation has yet to be realized. In fact, the EPA has a 2-year implementation plan which they have only just begun. Nonetheless, the Air Force is actively pursuing an early understanding of the new requirements in an attempt to build a proactive plan/budget.

Folded into this effort is an ongoing contract to determine the cost of full compliance for all media over the next decade. Under this contract, we are developing computer models that are based on current Air Force assets, construction cost factors, and technical expertise dealing with anticipated Clean Air standards as well as future regulation of other environmental media. Although this contract is only at the preliminary draft stage, the current computer-generated cost for compliance with the Clean Air Act is $1.2 billion through fiscal year 2000. The study also suggests that we will be able to meet these requirements using available technologies.

While we work to finalize these estimates and our long-range plan for the future, I can assure you that the Air Force is committed to environmental protection and will meet its environmental responsibilities.

Miss **Schafer**. It is difficult to prepare reliable estimates for long-term compliance costs for meeting the Clean Air Act until implementing regulations are developed. We have begun an assessment to identify and quantify projects required to meet current and projected environmental laws and regulations (including CAA) for the fiscal year 1994 through fiscal year 1999 time period. We expect to complete the analysis this year.

We document requirements as they become known and request funding through the normal budget process.

A major technological impediment is the lack of "drop-in" replacement chemicals for CFCs and halons. The available substitutes tested to date for refrigeration applications will require modifications to existing shipboard and aircraft plants. Furthermore, there is no acceptable agent that can satisfy the legislated phase out and serve as a drop in replacement for existing halon fire-fighting systems. A very significant effort will be required to backfit any of the halon replacement agents due to increased size and weight penalties. In certain applications, backfitting will not be an option due to ship design limitations. In general, the Navy can live with a zero release policy for CFCs, but not zero use. This does not apply to halon which is released during fire suppression.

Mr. **Reitman**. Based on our review to date of the requirements of the Clean Air Act, we expect to continue to conduct our activities in compliance with implementing regulations. Some additional sources which do not now require permitting will need permits, and some additional monitoring of air emissions from current sources may be required. DLA lacks the major industrial activities, weapon systems and volume of vehicles that are part of the service programs. Therefore, the impact will be much less. We do have large bulk fuel storage and distribution terminals to support service requirements. However, with the transfer from JP-4 to JP-8, a much less volatile fuel, we should be able to reduce our air emissions from these facilities to an extent that would be compatible with the new Clean Air Act requirements.

COMPLIANCE FUNDING

Senator **Dixon**. (Each witness) In your views, should we create a separate account for DOD compliance activities similar to the central Defense Environmental Restoration Account?

Mr. **Baca**. Mr. Chairman, I do not believe creation of a separate account for DOD compliance activities is the answer to this issue. Our commanders in the field need to retain flexibility and control in managing their limited funds so money can be used where it is needed most. These individuals are best suited to make the right choices and they do.

Mr. **Walker**. Recommend central DERA type account be used only for environmental restoration. Services should continue to budget and manage environmental compliance funds.

The mechanics of a DERA type transfer account are not compatible with execution of recurring operations. These procedures would complicate the ability to provide resources in a timely manner for the correction of unforeseen environmental non-compliance.

Complexities of establishing a DERA type account for requirements as diverse as R&D, MILCON, recurring O&M including pay of people, and Guard (integrated with State financing) make this proposal unworkable. Creation of this account at DOD level would tend to uncouple commanders' legal liability from financial management authority. This would be counter-productive to Army efforts to improve our record on environmental compliance. Army has taken steps to improve management and visibility, such as, fiscal policy directives and execution review, program elements in the Defense program, new reporting and documentation, and new accounts to yield feedback on obligations and outlays.

Mr. **Vest**. I would like to restate that in a military organization perhaps one of the most important things is the commitment of the leadership. The current Air Force leadership is environmentally-smart and sensitive to the need to preserve and protect our environment. They "own" the compliance program and are addressing it with vigor and commitment.

To "fence" compliance funding would dilute this ownership and remove the authority to commit needed resources from the individual legally liable for compliance, the local installation commander. Because compliance as well as base operations is very dynamic, it is essential that installation commanders have this authority to ensure base operations meet all environmental compliance regulations/standards. These commanders are in the best position to assess the relative merits of all installation/mission requirements and are capable of expeditiously addressing their immediate priorities.

Our commanders are committed to environmental compliance and over the past year, have integrated it into the mainstream of the Air Force. Even in fiscal year 1990, the first year in which the AF specifically budgeted for environmental compliance, commanders fulfilled the entire compliance budget. In fact, they expensed an additional $39 million sourced from O&M requirements that were of lesser priority than unplanned, emergent compliance requirements. Again in fiscal year 1991, we have witnessed commanders stepping-up to their environmental responsibilities even if this should result in addressing unforeseen requirements that have arisen from this dynamic program.

In short, environmental compliance is a top priority in the Air Force from the Chief of Staff, General Tony McPeak, to the personnel at installations throughout the world. I firmly believe that centralization of compliance funding in an account similar to the Defense Environmental Restoration Account is unnecessary.

Miss **Schafer**. No, I do not believe that a separate, central compliance account is needed. As you know, environmental restoration deals with remediation resulting from past hazardous waste disposal practices. A single, dedicated account to address this program is appropriate. Environmental compliance, however, is the responsibility of the local base commander and is a cost of doing business like other mission requirements. It is most appropriate for compliance to be integrated into existing service budgets. Doing otherwise would lessen service and installation accountability for compliance.

Mr. **Reitman**. In many ways, a separate account for environmental compliance, similar to DERA for restoration activities, would simplify the accounting for the environmental program and allow us to effectively determine actual costs and requirements. However, our current method of allocating funds has also proven effective in ensuring that projects needed for environmental compliance received the necessary priority in funding allocations.

COMPLIANCE AUDITS

Senator **Dixon**. Mr. Baca, what type of periodic audits do you conduct of environmental compliance programs throughout the military services and Defense activities? Is there a central follow-up process at DOD or service level for notices of violation of environmental regulations?

Mr. **Baca**. Environmental compliance and management assessments are conducted by each of the services. Further, DOD has tasked the Inspector General to review the services' environmental programs on a continuing basis. There is a formal follow-up process during audits which our office periodically reviews.

Questions Submitted by Senator Carl Levin

CLEANUP COSTS FOR ROUND I BASES

Senator **Levin**. How much have we spent already and what will be the cost to clean up the first round of closed bases?

Mr. **Baca**. Our costs to clean up the first round of closed bases are estimated as follows:

Fiscal years:	*Millions*
1991	$109.9
1992	223.6
1993	181.2
1994 and beyond	305.5
Total cost	$820.2

CLEANUP COSTS FOR ROUND II BASES

Senator **Levin**. When you provide for the committee the total estimated cost of cleanup for Round II bases on the list finalized July 1; please also provide for the record:

- the anticipated sources for that funding, including how much will be allocated from the Defense Environmental Restoration Program, how much from the Base Closure Account 1990, how much from any anticipated sale of assets, and any other sources.
- a projection of annual cleanup costs for Round II base closures in each of the next 5 fiscal years.

Mr. **Baca**. Our estimated cost of cleanup for Round II bases through fiscal year 1993 is $686.5 million. Of that, figure, we estimate $632.1 million will be allocated from the Defense Environmental Restoration Program and $54.4 million from accounts to meet compliance requirements that are closure related. For fiscal year 1994 and beyond, our estimate to clean up remaining requirements for Round II bases is $1.9 billion. Further details have recently been provided to Congress as requested during the week of July 8, 1991, for use during the fiscal year 1992 mark up.

ENVIRONMENTAL RESTORATION IN MICHIGAN

Senator **Levin**. Does Michigan still have 234 contaminated sites at military installations that require environmental restoration, and has cleanup been completed at only three of those sites?

Mr. **Baca**. Of the 234 sites in Michigan that were identified by the Department of Defense as having potential for contamination, 118 have been removed after extensive assessments revealed there is no contamination. Three sites that were found to have some contamination have been fully remediated. This leaves 113 sites that are still being evaluated.

Senator LEVIN. Among the environmental problems at Wurtsmith Air Force Base in Michigan is trichlorethylene (TCE) contamination in water supply wells on and off the base. Over the last decade, there have been suits by the State of Michigan to force the base to clean up, monitoring wells that have been installed, and the parties are now trying to negotiate an interagency agreement. What is the status of those negotiations? Are there plans to install city water lines to temporarily resolve contamination problems that are affecting citizens' access to clean water?

Mr. VEST. The Air Force has offered to begin negotiating a three party agreement with Michigan Department of Natural Resources (MDNR) and Environmental Protection Agency in anticipation of being placed on the National Priorities List. The negotiation for the three party agreement has not yet begun. Funds have been received for two projects to connect 29 residences along the base perimeter to township water. Two additional funding requests have been made for fiscal year 1992 to connect the remaining residences to township water.

Senator LEVIN. How much money has been spent on clean up activities at Wurtsmith overall, and how much has been spent to clean up TCE contamination since the problem was discovered?

Mr. VEST. Approximately $9.5 million has already been spent cleaning up the environmental contamination at Wurtsmith. The majority of the money spent to date has been spent to cleanup the TCE contamination.

Senator LEVIN. How much more will it cost for each of the next 5 fiscal years to conduct remedial activities at Wurtsmith?

Mr. VEST. Our budget estimates for the next 5 fiscal years are as follows:

Fiscal years:	*Millions*
1992	$ 2.3
1993	3.9
1994	4.8
1995	11.6
1996	1.4

Senator LEVIN. What are the timelines for clean-up efforts at Wurtsmith if it remains open and if it is closed? If the base is closed, will the cleanup process of DERA sites there be expedited or slowed down? Under either scenario, when will this work be completed and what will be the total cost?

Mr. VEST. Our long-term cleanup plan will reflect an acceleration at Wurtsmith if it is scheduled to close. Our goal is to have all sites in the Remedial Action cleanup phase by the end of fiscal year 1993 if closure is planned. Although the sites will be in Remedial Action by fiscal year 1993, the actual cleanup process will take much longer. We anticipate our groundwater treatment systems will be operational for the next 40 years. Based on our current knowledge of the contamination, we expect to spend a total of $30 million during the fiscal years 1992–2000. Due to the unknown nature of some contamination this long-term estimate may change over time.

Senator LEVIN. If Wurtsmith is closed, does the Air Force plan to thoroughly restore the base to an environmentally sound condition? Is there a need for additional staff to ensure that remedial efforts are carried out in an effective and timely manner?

Mr. VEST. The Air Force will continue to restore Wurtsmith to an environmentally sound condition regardless of whether or not the base closes. We have already funded an additional two staff positions starting in fiscal year 1992 to carry out the Installation Restoration Program at Wurtsmith. A blanket waiver to the Federal hiring freeze for environmental positions is currently being staffed through the Department and if approved would help the hiring process.

QUESTIONS SUBMITTED BY SENATOR TIMOTHY E. WIRTH

ENVIRONMENTAL RESTORATION IN COLORADO

Senator WIRTH. I note that Colorado is to receive a total $89.7 million in DERA funding in fiscal year 1991, primarily for cleanup at the Rocky Mountain Arsenal. Under the administration's request, this budget grows to $99.7 million in fiscal year 1992, and then is to decline to $61.4 million in fiscal year 1994. Please detail what share of the Colorado money is dedicated to Rocky Mountain Arsenal cleanup, and explain why the administration's request for cleanup in Colorado declines in fiscal year 1993.

Mr. **Baca**. The Department's budget request for DERA funding for Colorado is as follows:

Fiscal years:	*Millions*
1991	$89.7
1992	98.8
1993	81.4

That portion budgeted for Rocky Mountain Arsenal is as follows:

Fiscal years:	*Millions*
1991	$84.5
1992	78.8
1993	62.9

When this budget was submitted, it was envisioned that the majority of awards for interim cleanup at Rocky Mountain Arsenal would be made in fiscal year 1991 and fiscal year 1992. More accurate budget requests for costs of follow-on cleanup projects at Rocky Mountain Arsenal in fiscal year 1994 and beyond will be reflected in our submission of the fiscal years 1993-1994 budget.

DEFENSE ENVIRONMENTAL RESTORATION ACCOUNT

Senator **Wirth**. As far as I can tell, the amount requested for the DERA account is spent directly on cleanup projects in the United States. What funds are being spent to research and develop new and more efficient cleanup technologies? Are these funds in DERA? How do such funds relate to the SERDP planning process? What effort at coordination among the services in this research is being made? How is the amount of R&D funding for environmental restoration arrived at? Is there an analytical model for projected tasks and costs?

Mr. **Baca**. A portion of DERA funds is spent directly on research and development. This funding is entirely independent of the SERDP planning process. I would also point out that the services have their own RDT&E funds that they are committing toward environmental RDT&E projects. Coordination is handled by the Installation Restoration Technology Coordination Group which is made up of representatives from all the services. At present we do not use an analytical model for projected tasks and costs.

LIABILITY AND INDEMNIFICATION

Senator **Wirth**. Private contractors perform most of the DERA work at the various sites. Does the Department believe that liability considerations have kept many qualified companies from bidding on defense cleanup jobs? Should we apply the same liability limitation within DOD as is now in place at DOE?

Mr. **Baca**. As stated in my previous testimony, we believe we have been able to get adequate competition for our remediation contracts although some firms are not in the market because of risk concerns. Since providing our testimony, we have provided Congress with our report on the liability and indemnification issue which addresses your concerns more fully. We will continue to work this issue with the insurers and remedial action contractors. Our situation is different from that of DOE. Our sites largely involve contaminations that would be found in communities throughout the Nation. We do not have the unique mixed-waste problems of DOE which continually push the state of the art in technology.

Questions Submitted by Senator Trent Lott

COMPLIANCE

Senator **Lott**. Miss Schafer, the Navy is the principal user and the service most affected by the changing CFC and halon deletions and/or substitutions. You recognize the critical nature of this upcoming changeover in your statement for the record. You say that additional time is needed and recommend no acceleration of the phase out of CFCs and halons until suitable alternatives are available.

This is a timetable over which we may have little control to modify. Would you give some of the possible cost, schedule, and readiness problems associated with the present schedule? Are there any actions which we may have control of that you would recommend?

Miss **Schafer**. For certain mission critical CFC and halon applications, the Navy expects to continue to use these chemicals beyond the year 2000 because of the time required to fully qualify new agents for shipboard or aircraft use and lack of "drop in" replacement chemicals for certain applications. For applications in which a "drop in" replacement chemical hasn't been developed, design limitations may prevent the replacement chemical from being backfitted. For example, there are currently no acceptable agents that could serve as "drop in" replacements for the halon in fire-fighting systems. It is imperative that the Navy continue to use these chemicals to fulfill mission and safety requirements.

The Navy plans to start backfitting exiting shipboard CFC-12 air conditioning plants with an environmentally acceptable alternative in fiscal year 1994. Completion is expected in the year 2000. In addition, the Navy is planning on backfitting CFC-114 air conditioning plants starting in fiscal year 1996. Completion is expected in the year 2007.

The total estimated cost to comply with the requirement to phase out CFCs and halon is over $700 million.

The Navy would recommend that Congress not accelerate the current phase out of CFCs and halons until suitable substitutes are available. In addition, the Congress should not ban the use of these chemicals in mission critical applications. A zero release policy, but not zero use, for CFCs is acceptable to the Navy. A zero use policy for halon is unworkable since halon is released for fire suppression.

DOD REPORTS FOR CONGRESS

Senator LOTT. Mr. Baca, last year the Congress dealt with some very sensitive issues on liability, indemnification, model base cleanup for base closures, and education projects for DOD personnel. Each of them required reports and/or responses. We are now back at markup again. We have no reports to form a Senate position. The House has formed their own positions. The same issues will again be before the Authorization Conference. Will these responses be received before we have to conference with the House or would you recommend we postpone action for another year?

Mr. BACA. Our report on liability and indemnification was recently provided to Congress. Concerning the model base cleanup for base closures, the Department of Defense is currently in the process of identifying installations that meet the various requirements of Section 2926 of Public Law 101-510, and that will also make a reasonable test of the contract provisions required by that section. The single contractor and indemnification requirements as well as the requirement that specific steps must have already been completed in the restoration program make the selection of installations complex. The Department is currently exploring alternatives for the selection process that will produce practical solutions to the possibly conflicting requirements and, at the same time, make a good test of the model. Concerning your question about education projects for DOD personnel, we are moving forward as previously addressed. Funding for this program will come from the O&M account within DOD.

UPDATED COST ESTIMATE FOR DERA

Senator LOTT. Mr. Baca, in your statement for the record you refer to a new estimate being made for the total cost of DOD facility cleanup under the Defense Environmental Restoration Account (DERA). The current estimate is $9-$14 billion. You feel the new number will be higher. When will that new estimate be available?

Mr. BACA. Our updated estimate for the total cost of DOD facility cleanup under the DERA is now under final review and will be provided to Congress shortly.

ENVIRONMENTAL PROGRAM COSTS

Senator LOTT. Mr. Baca, the costs for environmental programs are increasing at a high rate with each budget submission. Do you have an estimate of where, in dollars, and when, in fiscal year, that these costs should level off?

Mr. BACA. We anticipate our cleanup costs to peak and level off around fiscal year 1998 at a cost approaching $3 billion. In the compliance area, we have established our goal of achieving and sustaining compliance within the next 2 years. The costs involved to maintain this compliance will rise or fall depending on passage of new regulations and laws.

Senator LOTT. Mr. Walker, the Army is the executive agent for DOD for the Formerly Used Defense Sites (FUDS) cleanup. Is this an area of funding needs that has leveled off or is it one that will continue to rise?

Mr. WALKER. The FUDS program is predicted to rise by fiscal year 1993 to the $200 million per year range and remain there through fiscal year 2000 and then taper off. The cost to complete the FUDS program is predicted to be $2.6 billion.

Senator Lott. Mr. Walker, the Army is the executive agent for DOD ammunition plants and their compliance and cleanup requirements. As more of these plants are either closed and/or put into layaway, the need for funds will increase to meet these needs. What is your estimate of their future needs? How do you handle a plant in layaway versus a plant being closed, as far as compliance and restoration is concerned?

Mr. Walker. When a plant is placed in layaway status, the process and procedures remain the same as when the plant was active. We maintain the level of activity commensurate with the plants layaway status in compliance with all applicable regulations and statutes. The restoration program addresses problems from past activities and therefore is unaffected by a change in status from active to layaway.

A plant being closed will be assessed to determine the degree of environmental hazards using the RI/FS process. Depending on the ultimate use of this property, the level of cleanup required will be carried out. Property sold for industrial use will require much less cleanup as compared to property sold for unrestricted land use. Study and restoration efforts are carried out in cooperation with State and Federal regulatory agencies. The public is also given the opportunity to provide input on the Army's efforts as in the DERA program. In the event that the cost of cleanup is significantly greater than the value of the property the Army will carry out those remedial actions necessary to protect human health and the environment and pursue future cleanup under DERA.

Senator Lott. Mr. Vest, the Air Force worked a special deal for the closing/transfer of Pease AFB, New Hampshire. How is this arrangement working? Would you recommend it for other bases scheduled for closing? Do you believe that the other EPA regions would have agreed to this special arrangement in their regions? What do you believe the effect of this or similar actions will have on the emphasis a service will give to continue the cleanup of the installation? (It is a concern that the service will put more effort and funds into other installations and reduce cleanup efforts at the installation where they get this special exemption.)

Mr. Vest. The Air Force has worked no special "deals" for the closure and transfer of properties at Pease AFB, New Hampshire. However, the Congress did adopt a special provision in the Defense Appropriations Act of 1991 which indemnified the State of New Hampshire and lenders for any liability associated with releases of hazardous substances caused by the Air Force at Pease AFB. This provision simply clarified and reinforced the commitments the Air Force has previously made to cleanup the contamination at our installations caused by our past (and ongoing) activities.

Senator Lott. Mr. Vest, in your statement you point out that the Air Force has formed regional offices to work with Federal and State authorities on environmental issues. I assume that the costs for these offices are being paid from the current Air Force funds. Are these investments worth the return so far? Where in the budget request would these costs be shown?

Mr. Vest. You are correct; our new regional environmental offices are funded through current Air Force resources. They are funded through the Air Force Engineering and Services Center at Tyndall AFB, Florida. While Air Force Environmental Compliance O&M is spread across a number of Major Force Programs (MFPs) within the budget, the Center's is within MFP 7: Central Supply and Maintenance. The fiscal year 1992 compliance line within MFP 7 is $50.9 million (does not include manpower); however, this figure represents compliance funding for more than just the Center. It covers many requirements to include all of the O&M non-manpower compliance needs for the new Air Force Materiel Command. Specific narrative pertaining to the regional offices was not included in the budget request.

Compliance manpower was not available at the time that the fiscal year 1992 budget request was prepared. The fiscal year 1993 request will provide this visibility.

At the beginning of fiscal year 1991, the Air Force had no real measure of its environmental compliance status nor was an investment program in place to address compliance deficiencies. Therefore, during the first quarter of fiscal year 1991, the three regional offices were established at Atlanta, Dallas, and San Francisco to interface directly between the Major Commands and the individual State and Environmental Protection Agency regional offices. The database of open enforcement actions was developed and trends analyzed to determine causes and appropriate solution sets. The first Air Force compliance status briefing was presented in December 1990 and are being continued on a quarterly basis. While we continue to fine-tune these organizations, we are very happy with the successes to date.

[Whereupon, at 10:35 a.m., the hearing was adjourned.]

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